```
                    85              90              95
Ser Thr Cys Pro Arg Trp Arg Thr Asp Val Ser Pro Ala Asp Thr Ile
            100             105             110
Ala Pro Arg Ser Trp Leu Leu Pro Leu Ser Ala Thr
        115             120
```

<210> 6109
<211> 2087
<212> DNA
<213> Homo sapiens

<400> 6109
aggccggaag cgcgcggaga ccatgtagtg agaccctcgc gaggtctgag agtcactgga
60
gctaccagaa gcatcatggg gccctgggga gagccagagc tcctggtgtg gcgccccgag
120
ggtagcttca gagcctccag tgcctgtggg gctggaggtg aagttggggg ccctggtgct
180
gctgctggtc tcaccctcct ctgcagcctg gtgcccatct gtgtgctgcg ccggccagga
240
gctaaccatg aaggctcagc ttcccgccag aaagccctga gcctagtaag ctgtttcgcg
300
gggggcgtct ttttggccac ttgtctcctg gacctgctgc ctgactacct ggctgccata
360
gatgaggccc tggcagcctt gcacgtgacg ctccagttcc cactgcaaga gttcatcctg
420
gccatgggct tcttcctggt cctggtgatg gagcagatca cactggctta caaggagcag
480
tcagggccgt cacctctgga ggaaacaagg gctctgctgg aacagtgaa tggtgggccg
540
cagcattggc atgatgggcc aggggtccca caggcgagtg agccccagc aaccccctca
600
gccttgcgtg cctgtgtact ggtgttctcc ctggccctcc actccgtgtt cgaggggctg
660
gcggtagggc tgcagcgaga ccgggctcgg gccatggagc tgtgcctggc tttgctgctc
720
cacaagggca tcctggctgt cagcctgtcc ctgcggctgt tgcagagcca ccttagggca
780
caggtggtgg ctggctgtgg gatcctcttc tcatgcatga cacctctagg catcgggctg
840
ggtgcagctc tggcagagtc ggcaggacct ctgcaccagc tggcccagtc tgtgctagag
900
ggcatggcag ctggcacctt tctctatatc acctttctgg aaatcctgcc ccaggagctg
960
gccagttctg agcaaaggat cctcaaggtc attctgctcc tagcaggctt tgccctgctc
1020
actggcctgc tcttcatcca aatctagggg gcttcaagag aggggcaggg gagattgatg
1080
atcaggtgcc cctgttctcc cttccctccc ccagttgtgg ggaataggaa ggaaagggga
1140
agggaaatac tgaggaccaa aaagttctct gggagctaaa gatagagcct ttggggctat
1200
ctgactaatg agagggaagt gggcagacaa gaggctggcc ccagtcccaa ggaacaagag
1260
```

5292

```
atggtcaagt cgctagagac atatcagggg acattaggat tggggaagac acttgactgc
1320
tagaatcaga ggttggacac tatacataag gacaggctca catgggaggc tggaggtggg
1380
tacccagctg ctgtggaacg ggtatggaga ggtcataaac ctagagtcag tgtcctgttg
1440
gtcctagccc atttcagcac cctgccactt ggagtggacc cctcctactc ttcttagcgc
1500
ctaccctcat acctatctcc ctcctcccat ctcctagggg actggcgcca aatggtctct
1560
ccctgccaat tttggtatct tctctggcct ctccagtcct gcttactcct ctatttttaa
1620
agtgccaaac aaatcccctt cctctttctc aaagcacagt aatgtggcac tgagccctac
1680
ccagcacctc agtgaagggg gcctgcttgc tctttatttt ggtcccggat cctggggtgg
1740
ggcagaaata ttttctgggc tggggtagga ggaaggttgt tgcagccatc tactgctgct
1800
gtaccctagg aatatgggga catggacatg gtgtcccatg cccagatgat aaacactgag
1860
ctgccaaaac attttttaa atacacccga ggagcccaag ggggaagggc aatgcctacc
1920
cccagcgtta tttttgggga gggagggctg tgcataggga catattcttt agaatctatt
1980
ttattaactg acctgttttg ggacctgtta cccaaataaa agatgtttct agacatctgt
2040
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
2087
```

```
<210> 6110
<211> 323
<212> PRT
<213> Homo sapiens
```

```
<400> 6110
Met Gly Pro Trp Gly Glu Pro Glu Leu Leu Val Trp Arg Pro Glu Gly
1               5                   10                  15
Ser Phe Arg Ala Ser Ser Ala Cys Gly Ala Gly Gly Glu Val Gly Gly
            20                  25                  30
Pro Gly Ala Ala Ala Gly Leu Thr Leu Leu Cys Ser Leu Val Pro Ile
            35                  40                  45
Cys Val Leu Arg Arg Pro Gly Ala Asn His Glu Gly Ser Ala Ser Arg
        50                  55                  60
Gln Lys Ala Leu Ser Leu Val Ser Cys Phe Ala Gly Gly Val Phe Leu
65                  70                  75                  80
Ala Thr Cys Leu Leu Asp Leu Leu Pro Asp Tyr Leu Ala Ala Ile Asp
                85                  90                  95
Glu Ala Leu Ala Ala Leu His Val Thr Leu Gln Phe Pro Leu Gln Glu
            100                 105                 110
Phe Ile Leu Ala Met Gly Phe Phe Leu Val Leu Val Met Glu Gln Ile
            115                 120                 125
Thr Leu Ala Tyr Lys Glu Gln Ser Gly Pro Ser Pro Leu Glu Glu Thr
        130                 135                 140
Arg Ala Leu Leu Gly Thr Val Asn Gly Gly Pro Gln His Trp His Asp
```

```
     145                    150                    155                    160
     Gly Pro Gly Val Pro Gln Ala Ser Gly Ala Pro Ala Thr Pro Ser Ala
                     165                    170                    175
     Leu Arg Ala Cys Val Leu Val Phe Ser Leu Ala Leu His Ser Val Phe
             .   180                    185                    190
     Glu Gly Leu Ala Val Gly Leu Gln Arg Asp Arg Ala Arg Ala Met Glu
             195                    200                    205
     Leu Cys Leu Ala Leu Leu Leu His Lys Gly Ile Leu Ala Val Ser Leu
         210                    215                    220
     Ser Leu Arg Leu Leu Gln Ser His Leu Arg Ala Gln Val Val Ala Gly
     225                    230                    235                    240
     Cys Gly Ile Leu Phe Ser Cys Met Thr Pro Leu Gly Ile Gly Leu Gly
                     245                    250                    255
     Ala Ala Leu Ala Glu Ser Ala Gly Pro Leu His Gln Leu Ala Gln Ser
             260                    265                    270
     Val Leu Glu Gly Met Ala Ala Gly Thr Phe Leu Tyr Ile Thr Phe Leu
             275                    280                    285
     Glu Ile Leu Pro Gln Glu Leu Ala Ser Ser Glu Gln Arg Ile Leu Lys
         290                    295          .         300
     Val Ile Leu Leu Leu Ala Gly Phe Ala Leu Leu Thr Gly Leu Leu Phe
     305                    310                    315                    320
     Ile Gln Ile
```

<210> 6111
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 6111

```
nnagatctgc ctgcctctct gcccccaaag tggtgggatt acaggtgtga gccactgctc
60
ccagccaaga aattctttat atgtagatac tattttcttg tcaagttcag atgttggaaa
120
taacttgcca tttgttcatt cttgtctttg ttgtttttca tataatagaa atcccccaa
180
tgttttatat cttttatgtc tttattttgt tttgttttgt ttttgagatg gagtttccct
240
cttgttgccc aggctggagt gnagtggcac agtctcggct cactgcaacc tccacttcct
300
gggttcaagc agttctcgtg ccgcagcctc ccaagtagct gggactacag gcatgcgcca
360
ccacgccagg ctaatttttg tatttttagt agagatgggg tttcaccatg ttggccgggc
420
tggtctcaaa ctcctgacct caggcgatcc acccacctca gcgtcccaaa gtgctgggat
480
tataggcgtg agccaccgca cctggcctat gagtggtctt ttaattagga acaaatctaa
540
tggaaaggag agttgactga agttggccca caggattgtg agctgggcag tgccttcatg
600
aaggcttgcc accttgggac gccccagttt actggggtgt cttgcggagt gcagaaggct
660
ttctggcagc tgcctgggtt tggccagacc ctgcctcccc tcccgccggc caacccctag
720
```

```
tccccttcct gtctccactt gcattcaggg gtggctgctg ttctgagaac attagaactg
780
ggaagagaga tggagtcaca tggatttttg gtgggcatta ttctgaactt tcgtatccaa
840
gttagtcccc cttattccac tgtggcattg ccgttctaag cagttacctg atgcctgctg
900
ctgaagagct gctcacagga ggcggcggcg gccctggcac tgccccttgc attaggtctt
960
gtgtttgatg tgttcttgtg aatttacttt gtcagaacaa aatatttacg cgttgggttc
1020
aggaatttct tttagctccc catctggctg tgaaattcag gaaacctccc gttgcctagt
1080
aatcacccca tgtaggtgta cattgtgaca aagtgcatct gaccactaag gggccccctt
1140
ggtgacccca gcacattcac agcagtgtta aaatggcctg cattttggag atgctggctg
1200
gcctttcagt gcctcccagg aagacacatg gcctttccct cttcagatgc ctgaagggag
1260
tgctttgagg caggtgatgt gctgggagtg tgggcggcct ccctctggcc ccggggccct
1320
ctgtggacct tggctccctc cgtggacctg ggcttcgtgg tgagcactgc agcctccctg
1380
ggcattccct ccagcgccag caccactgca acatatagac ctgagtgcta ttgtattttg
1440
gcttggtgtg tatgctcttc attgtgtaaa attgctgttc ttttgacaat ttaagtgatt
1500
gttttgttta ctgtaagttt gaaaataaaa atgaagaaaa aaaattccaa tgactgtgct
1560
gtggttggag actttattta ccaagatgtt tactcttcct ttccccttcc attttgagga
1620
gctgtgtcac tcctcctccc ccccagtgct ttgtagtctc tcctatgtca taataaagct
1680
acattttctc tgaaaaaaaa aaaaaa
1706
```

<210> 6112
<211> 110
<212> PRT
<213> Homo sapiens

<400> 6112

```
Met Ser Leu Phe Cys Phe Val Leu Phe Leu Arg Trp Ser Phe Pro Leu
1               5                   10                  15
Val Ala Gln Ala Gly Val Xaa Trp His Ser Leu Gly Ser Leu Gln Pro
            20                  25                  30
Pro Leu Pro Gly Phe Lys Gln Phe Ser Cys Arg Ser Leu Pro Ser Ser
            35                  40                  45
Trp Asp Tyr Arg His Ala Pro Pro Arg Gln Ala Asn Phe Cys Ile Phe
        50                  55                  60
Ser Arg Asp Gly Val Ser Pro Cys Trp Pro Gly Trp Ser Gln Thr Pro
65                  70                  75                  80
Asp Leu Arg Arg Ser Thr His Leu Ser Val Pro Lys Cys Trp Asp Tyr
                85                  90                  95
Arg Arg Glu Pro Pro His Leu Ala Tyr Glu Trp Ser Phe Asn
```

100   105   110

<210> 6113
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 6113
nncggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac tttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgatgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctagta agtggggtcg ggaggcgggc gtggagggac ccacgtctgg aagttgctgc
240
agccaccacg acgctcttct acggctacgg ctttgtctct gctggtatgg gggtgggagc
300
atacgcgtag gccttggccc tatttcctgg tagaaccgag agttggaagt ccctacggcg
360
atcatgttaa ccgcgcgggc tcattctgcg gaacgaagcc gggcagaggg tggggaagac
420
taggctagat tttcgtaagg aagcagcgtc tgagccaggt ttgaggccca atattttctt
480
tccgtggcca cgtgcagact ggcccaggtg agagctgaga atcgcctccc agactcagtg
540
ttcctctcct gccttatgat tcgtgctgtt tgacacgaag tggttgtcgt tttgtgtctc
600
atacgctgtt gtgtatgatc ccattctaat attgtgaggg taagtgcagg gaattttgac
660
tccattctgg atctactgaa tttaattctc tgggatttga aagtagcacg tatgtttgca
720
ttaggcattt cgcattagac ttaacgttag gtttggtagc caataacaca agaaaaggat
780
ataactccat agtgcgttaa cccagaacta atcatttggg ttaacagatt tgtgatgtgt
840
ttctttgtag agttaaagaa agcaagtaaa cgcatgacct gccataagcg gtataaaatc
900
caaaaaaagg ttcgagaaca tcatcgaaaa ttaagaaagg aggctaaaaa gcggggtcac
960
aagaagccta ggaaagaccc aggagttcca aacagtgctc cctttaagga ggctcttctt
1020
gaggaagctg agctaaggaa acagaggctt gaagaactaa aacagcagca gaaacttgac
1080
aggcagaagg aacta
1095

<210> 6114
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6114
Met Cys Phe Phe Val Glu Leu Lys Lys Ala Ser Lys Arg Met Thr Cys

```
 1               5                10               15
His Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys
                20               25               30
Leu Arg Lys Glu Ala Lys Lys Arg Gly His Lys Lys Pro Arg Lys Asp
            35               40               45
Pro Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Glu Glu
        50               55               60
Ala Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys
65           ·   70               75               80
Leu Asp Arg Gln Lys Glu Leu
                85
```

<210> 6115
<211> 411
<212> DNA
<213> Homo sapiens

<400> 6115

```
gcgcgcctgg ccccgccagg gcctaagttc cctgcactcg cttccccgcc tgtcgccgcc
60
gccgccgccc gcagccctcc ttctcgtggg cgctggggaa gaaactcgtc ggcgggtcta
120
actgtggcgt cccagggcgg tggagggagc aacttcgggg gcacgtcctc gtaaatcccg
180
tggaggacac tgaccctgta ccccaccctc gaggccagaa gtcggttcct ttgggggaac
240
tgaggggcga gagcactcgc ccccctgact tgcaaagttg gcgtctttac ttggcctccg
300
ggattctgcg catggcgtgt ctccaggctg ctgatgggca agacagatgt gccaggtcca
360
gaatgaactt gagaagagtt tgtagccatt cctgaatcac cttatactag t
411
```

<210> 6116
<211> 129
<212> PRT
<213> Homo sapiens

<400> 6116

```
Met Ala Thr Asn Ser Ser Gln Val His Ser Gly Pro Gly Thr Ser Val
1               5                10               15
Leu Pro Ile Ser Ser Leu Glu Thr Arg His Ala Gln Asn Pro Gly Gly
                20               25               30
Gln Val Lys Thr Pro Thr Leu Gln Val Arg Gly Ala Ser Ala Leu Ala
            35               40               45
Pro Gln Phe Pro Gln Arg Asn Arg Leu Leu Ala Ser Arg Val Gly Tyr
        50               55               60
Arg Val Ser Val Leu His Gly Ile Tyr Glu Asp Val Pro Pro Lys Leu
65               70               75               80
Leu Pro Pro Pro Trp Asp Ala Thr Val Arg Pro Ala Asp Glu Phe
                85               90               95
Leu Pro Gln Arg Pro Arg Glu Gly Gly Leu Arg Ala Ala Ala Ala Ala
            100              105              110
Thr Gly Gly Glu Ala Ser Ala Gly Asn Leu Gly Pro Gly Gly Ala Arg
```

```
          115                120                 125
Arg


<210> 6117
<211> 962
<212> DNA
<213> Homo sapiens


<400> 6117
cttccgcctt ccccaagcca acgtctccgc cgtcggctcc gcggcgccgc catggccgac
60
gtggaagacg gagaggaaac ctgcgccctg gcctctcact ccgggagctc aggctccaag
120
tcgggaggcg acaagatgtt ctccctcaag aagtggaacg cggtggccat gtggagctgg
180
gacgtggagt gcgatacgtg cgccatctgc agggtccagg tgatggatgc ctgtcttaga
240
tgtcaagctg aaaacaaaca agaggactgt gttgtggtct ggggagaatg taatcattcc
300
ttccacaact gctgcatgtc cctgtgggtg aaacagaaca atcgctgccc tctctgccag
360
caggactggg tggtccaaag aatcggcaaa tgagagtggt tagaaggctt cttagcgcag
420
ttgttcagag ccctggtgga tcttgtaatc cagtgcccta caaaggctag aacactacag
480
gggatgaatt cttcaaatag gagccgatgg atctgtggtc ctttgggact catcaaagcc
540
ttggtttagc attttgtcag ttttatcttc agaaattctc tgcgattaag aagataattt
600
attaaaggtg gtccttccta cctctgtggt gtgtgtcgcg cacacagctt agaagtgcta
660
taaaaaagga aagagctcca aattgaatca cctttataat ttacccattt ctatacaaca
720
ggcagtggaa gcagtttcag agaacttttt gcatgcttat ggttgatcag ttaaaaaaga
780
atgttacagt aacaaataaa gtgcagttta aaacccaact cttactctta atttgttcct
840
aatacgtatt tttggcaggg agagggaacg gtccatgaaa tctttatgtg atataaggat
900
tttaagtttg ggccagtgaa cagggtaaat aaaatttaac ttttgagcat aaaaaaaaaa
960
aa
962


<210> 6118
<211> 113
<212> PRT
<213> Homo sapiens


<400> 6118
Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
1               5                   10                  15
Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu
```

```
                  20                    25                    30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
          35                    40                    45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
      50                    55                    60
Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
65                    70                    75                    80
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
                  85                    90                    95
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
              100                   105                   110
Lys
```

```
<210> 6119
<211> 375
<212> DNA
<213> Homo sapiens

<400> 6119
accggttgac aacctcccta tggggaagct agatacagcc ccatggacat gccccactga ·
60
cccccacacc ccacacggac tgcacggaaa tatcacagta accatctctc agtcacagcg
120
tggccccaca gaactcatgc ctgcttgctt taaacccacc aatgaaaact ccccatggga
180
aacctgcttg gataatactt tggaccccaa taaatgcttt aatcccacaa gtcctctgtc
240
tctgcctctc tcttgcccct acccactggt tgagcatgtg tgtcccaaac ggccctgcaa
300
ggtgtgctgc cctgttcttt ctgggctctg tcaaggaatc aaactgcttc tgttatgtga
360
tgtgtcatgt tgtgc
375
```

```
<210> 6120
<211> 118
<212> PRT
<213> Homo sapiens

<400> 6120
Met Gly Lys Leu Asp Thr Ala Pro Trp Thr Cys Pro Thr Asp Pro His
1               5                   10                  15
Thr Pro His Gly Leu His Gly Asn Ile Thr Val Thr Ile Ser Gln Ser
              20                    25                    30
Gln Arg Gly Pro Thr Glu Leu Met Pro Ala Cys Phe Lys Pro Thr Asn
          35                    40                    45
Glu Asn Ser Pro Trp Glu Thr Cys Leu Asp Asn Thr Leu Asp Pro Asn
      50                    55                    60
Lys Cys Phe Asn Pro Thr Ser Pro Leu Ser Leu Pro Leu Ser Cys Pro
65                    70                    75                    80
Tyr Pro Leu Val Glu His Val Cys Pro Lys Arg Pro Cys Lys Val Cys
                  85                    90                    95
Cys Pro Val Leu Ser Gly Leu Cys Gln Gly Ile Lys Leu Leu Leu Leu
```

```
                100               105               110
Cys Asp Val Ser Cys Cys
          115


<210> 6121
<211> 1039
<212> DNA
<213> Homo sapiens


<400> 6121
gacggaacgg cggtggtggc ccgcggaccg gacggggcac tatgaacgaa gaggagcagt
60
ttgtaaacat tgatttgaat gatgacaaca tttgcagtgt ttgtaaactg ggaacagaca
120
aagaaacact ctccttctgc cacatttgtt ttgagctaaa tattgagggg gtaccaaagt
180
ctgatctctt gcacaccaaa tcattaaggg gccataaaga ctgctttgaa aaataccatt
240
taattgcaaa ccagggttgt cctcgatcta agctttcaaa aagtacttat gaagaagtta
300
aaaccatttt gagtaagaag ataaactgga ttgtgcagta tgcacaaaat aaggatctgg
360
attcagattc tgaatgttct aaaaagcccc agcatcatct gtttaatttc aggcataagc
420
cagaagaaaa attactccca cagtttgagt cccaagtacc aaaatattct gcaaaatgga
480
tagatggaag tgcaggtggc atctctaact gtacacaaag aattttggag cagagggaaa
540
atacagactt tggactttct atgttacaag attcaggtgc cactttatgt cgtaacagtg
600
tattgtggcc tcatagtcac aaccaggcac agaaaaaaga agagacaatc tctagtccag
660
aggctaatgt ccagacccag catccacatt acagcagaga ggaataagtt tttgaagagt
720
taactcacca agtgcaagaa aaagattctt tggcctcaca gctccatgtc cgccacgttg
780
ccatcgaaca gcttctgaag aactgttcta agttaccatg tctgcaagta gggcgaacag
840
gaatgaagtc gcacctaccc ataaacaact gacctaaaca gacttacttc gtatgccctg
900
ccctttattg gtctcccaga catgcaaact ttgaagaagt ttgaagaaag ttgtggtccg
960
tttttttatg gtcattaaat ttgccaaaca taaggcagta tttaacatct ttgtcaaata
1020
aagcagatca ttatactct
1039


<210> 6122
<211> 221
<212> PRT
<213> Homo sapiens


<400> 6122
Met Asn Glu Glu Glu Gln Phe Val Asn Ile Asp Leu Asn Asp Asp Asn
```

5300

```
 1              5                    10                15
Ile Cys Ser Val Cys Lys Leu Gly Thr Asp Lys Glu Thr Leu Ser Phe
            20                  25                30
Cys His Ile Cys Phe Glu Leu Asn Ile Glu Gly Val Pro Lys Ser Asp
        35                  40                45
Leu Leu His Thr Lys Ser Leu Arg Gly His Lys Asp Cys Phe Glu Lys
    50                  55                60
Tyr His Leu Ile Ala Asn Gln Gly Cys Pro Arg Ser Lys Leu Ser Lys
65                  70                  75                80
Ser Thr Tyr Glu Glu Val Lys Thr Ile Leu Ser Lys Lys Ile Asn Trp
            85                  90                95
Ile Val Gln Tyr Ala Gln Asn Lys Asp Leu Asp Ser Asp Ser Glu Cys
        100                 105               110
Ser Lys Lys Pro Gln His His Leu Phe Asn Phe Arg His Lys Pro Glu
    115                 120                 125
Glu Lys Leu Leu Pro Gln Phe Glu Ser Gln Val Pro Lys Tyr Ser Ala
    130                 135                 140
Lys Trp Ile Asp Gly Ser Ala Gly Gly Ile Ser Asn Cys Thr Gln Arg
145                 150                 155                160
Ile Leu Glu Gln Arg Glu Asn Thr Asp Phe Gly Leu Ser Met Leu Gln
                165               170               175
Asp Ser Gly Ala Thr Leu Cys Arg Asn Ser Val Leu Trp Pro His Ser
            180                 185               190
His Asn Gln Ala Gln Lys Lys Glu Glu Thr Ile Ser Ser Pro Glu Ala
        195                 200               205
Asn Val Gln Thr Gln His Pro His Tyr Ser Arg Glu Glu
    210                 215               220
```

<210> 6123
<211> 900
<212> DNA
<213> Homo sapiens

<400> 6123
ntgcatgcct gtataccaca gctactcggg aggctgaggc gggagaatcg cttgaaccca
60
ggaggcggag gttgcggtga gctgagatcg caccattgca ctccagcctg ggcaacaaga
120
gcgaaacaac aagagaaaaa aaaggaagct gccctctgcc caaaacccac gtcgaggtcc
180
ccaaacctgg gacccttagg tcttttctca cttagcgtgc ccaaccttct cctggcagga
240
aacaagcctc caggtctgct tccccgcaaa ggactataca tggcaaatga cttaaagctc
300
ctgagacacc atctccagat tcccatccac ttccccaagg atttcttgtc tgtgatgctt
360
gaaaaaggaa gtttgtctgc catgcgtttc ctcaccgccg tgaacttgga gcatccagag
420
atgctggaga aagcgtcccg ggagctgtgg atgcgcgtct ggtcaagggt gagtgtgggg
480
ctctgggaat cctctgggag gaccttggat gactttctga ccttccccag gcacgttttc
540
agggtcatga tcctgccccc gcccggggga tctactgtcc tcccagtcac acccctctcc
600
```

ccgcaccgcc ttcctgctgt cttctcttct tcccagaatg aagacatcac cgagccgcag
660

agcatcctgg cggctgcaga gaaggctggt atgtctgcag aacaagccca gggacttctg
720

gaaaagatcg caacgccaaa ggtgaagaac cagctcaagg agaccactga ggcagcctgc
780

agatacggag cctttgggct gcccatcacc gtggcccatg tggatggcca aacccacatg
840

ttatttggct ctgaccggat ggagctgctg gcgcacctgc tgggagagaa gtggatgggc
900

<210> 6124
<211> 300
<212> PRT
<213> Homo sapiens

<400> 6124

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Xaa His Ala Cys Ile Pro Gln Leu Leu Gly Arg Leu Arg Arg Glu Asn
 1               5                  10                  15
Arg Leu Asn Pro Gly Gly Gly Gly Cys Gly Glu Leu Arg Ser His His
                20                  25                  30
Cys Thr Pro Ala Trp Ala Thr Arg Ala Lys Gln Gln Glu Lys Lys Lys
            35                  40                  45
Glu Ala Ala Leu Cys Pro Lys Pro Thr Ser Arg Ser Pro Asn Leu Gly
    50                  55                  60
Pro Leu Gly Leu Phe Ser Leu Ser Val Pro Asn Leu Leu Leu Ala Gly
65                  70                  75                  80
Asn Lys Pro Pro Gly Leu Leu Pro Arg Lys Gly Leu Tyr Met Ala Asn
                85                  90                  95
Asp Leu Lys Leu Leu Arg His His Leu Gln Ile Pro Ile His Phe Pro
            100                 105                 110
Lys Asp Phe Leu Ser Val Met Leu Glu Lys Gly Ser Leu Ser Ala Met
        115                 120                 125
Arg Phe Leu Thr Ala Val Asn Leu Glu His Pro Glu Met Leu Glu Lys
    130                 135                 140
Ala Ser Arg Glu Leu Trp Met Arg Val Trp Ser Arg Val Ser Val Gly
145                 150                 155                 160
Leu Trp Glu Ser Ser Gly Arg Thr Leu Asp Asp Phe Leu Thr Phe Pro
                165                 170                 175
Arg His Val Phe Arg Val Met Ile Leu Pro Pro Gly Gly Ser Thr
            180                 185                 190
Val Leu Pro Val Thr Pro Leu Ser Pro His Arg Leu Pro Ala Val Phe
        195                 200                 205
Ser Ser Ser Gln Asn Glu Asp Ile Thr Glu Pro Gln Ser Ile Leu Ala
    210                 215                 220
Ala Ala Glu Lys Ala Gly Met Ser Ala Glu Gln Ala Gln Gly Leu Leu
225                 230                 235                 240
Glu Lys Ile Ala Thr Pro Lys Val Lys Asn Gln Leu Lys Glu Thr Thr
                245                 250                 255
Glu Ala Ala Cys Arg Tyr Gly Ala Phe Gly Leu Pro Ile Thr Val Ala
            260                 265                 270
His Val Asp Gly Gln Thr His Met Leu Phe Gly Ser Asp Arg Met Glu
    275                 280                 285
Leu Leu Ala His Leu Leu Gly Glu Lys Trp Met Gly
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                290   295   300

<210> 6125
<211> 468
<212> DNA
<213> Homo sapiens

<400> 6125
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atgaaacagg acttagagga tgccagtaac aaggcggagg aggagagggc ccgcctggag
120
ggagaattga aggggctgca ggagcaaata gcagaaacca aagcccggct tatcacgcag
180
cagcatgatc gggcccaaga gcagagtgac catgccttga tgctgcgtga gctccagaag
240
ctgctgcagg aggagaggac ccagcgccag gacttggagc ttaggttaga agagacccga
300
gaagccttgg caggacgagc atatgcagct gaacagatgg aaggatttga actgcagacc
360
aagcagctga cccgtgaggt ggaggagctg aaaagtgaac tgcaggccat tcgagatgag
420
aagaatcagc cagacccccg gctgcaagaa cttcaggaag aggccgcc
468

<210> 6126
<211> 156
<212> PRT
<213> Homo sapiens

<400> 6126
Xaa Thr Val Thr Gln Glu Lys Ser Arg Met Glu Ala Ser Tyr Leu Ala
1   5   10   15
Asp Lys Lys Lys Met Lys Gln Asp Leu Glu Asp Ala Ser Asn Lys Ala
            20   25   30
Glu Glu Glu Arg Ala Arg Leu Glu Gly Glu Leu Lys Gly Leu Gln Glu
        35   40   45
Gln Ile Ala Glu Thr Lys Ala Arg Leu Ile Thr Gln Gln His Asp Arg
    50   55   60
Ala Gln Glu Gln Ser Asp His Ala Leu Met Leu Arg Glu Leu Gln Lys
65   70   75   ·   80
Leu Leu Gln Glu Glu Arg Thr Gln Arg Gln Asp Leu Glu Leu Arg Leu
                85   90   95
Glu Glu Thr Arg Glu Ala Leu Ala Gly Arg Ala Tyr Ala Ala Glu Gln
            100   105   110
Met Glu Gly Phe Glu Leu Gln Thr Lys Gln Leu Thr Arg Glu Val Glu
        115   120   125
Glu Leu Lys Ser Glu Leu Gln Ala Ile Arg Asp Glu Lys Asn Gln Pro
    130   135   140
Asp Pro Arg Leu Gln Glu Leu Gln Glu Glu Ala Ala
145   150   155

<210> 6127
<211> 1900

                            5303   ·

<212> DNA
<213> Homo sapiens

<400> 6127
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gaatgctggg atgggcacct gacaccccct gaggttgcat ccctggctga cagggcatca
120
cgggcaagag actccaatat ggtgagggcg gcagcagagc tggccctgag ctgcctgcct
180
cacgcccatg cattgaaccc taatgagatc cagcgggccc tggtgcagtg caaggaacag
240
gacaacctga tgttggagaa ggcctgcatg gcagtggaag aggcagctaa gggtgggggc
300
gtgtaccctg aagtgttgtt tgaggttgct caccagtggt tctggctata tgagcaaact
360
gcaggtggct catccacagc ccgtgaaggg gctacaagct gtagtgccag tgggatcagg
420
gcaggtgggg aagctgggcg gggtatgcct gagggtagag ggggcccagg gactgagccg
480
gttacagtgg cagcggcagc agtgacagca gcagccacag tggtgcccgt catatcggtg
540
gggtctagtt tatacccggg tccaggactg gggcatggcc actcccctgg cctgcacccc
600
tacactgctc tacagcccca cctgccctgt agccctcagt atctcactca cccagctcac
660
cctgcccacc ccatgcctca catgccccgg cctgccgtct tccctgtgcc cagctctgca
720
tacccacagg gtgtgcatcc tgcattccta ggggctcagt acccttattc agtgactcct
780
ccctcacttg ctgccactgc tgtgtctttc cccgttcctt ccatggcacc catcacagta
840
catccctacc acacagagcc agggcttcca ctgcccacca gtgtggcctg tgagttgtgg
900
ggccagggaa cagtgagcag tgtccatcca gcatccacgt ttccagccat ccaaggtgcc
960
tcactgcctg ccctgaccac acagcccagc cctctggtga gcggaggttt tccaccgccc
1020
gaggaggaga cacacagtca gccagtcaat ccccacagcc tgcaccacct gcatgctgcc
1080
taccgtgtcg gaatgctggc actggagatg ctgggtcgcc gggcacacaa cgatcacccc
1140
aacaacttct cccgctcccc cccctacact gatgatgtca aatggttgct ggggctggca
1200
gcaaagctgg gagtgaacta cgtgcaccag ttctgtgtgg gggcagccaa gggggtgctg
1260
agcccgtttg tgctgcagga gatcgtcatg gagacgctgc agcggctgag tcccgctcat
1320
gcccacaacc acctgcgtgc cccggccttc caccaactgg tgcagcgctg ccagcaggca
1380
tacatgcagt acatccacca ccgcttgatt cacctgactc ctgcggacta cgacgacttt
1440
gtgaatgcga tccggagtgc ccgcagcgcc ttctgcctga cgcccatggg catgatgcag
1500

5304

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ttcaacgaca tcctacagaa cctcaagcgc agcaaacaga ccaaggagct gtggcagcgg
1560
gtctcactcg agatggccac cttctccccc tgagtctttc acccttaggg tcctatacag
1620
ggacccaggc ctgtggctat gggggcccct cacacagggg gagtgaaact tggctggaca
1680
gatcatcctc actcagttcc ctggtagcac agactgacag ctgctcttgg gctatagctt
1740
ggggccaaga tgtctcacac cctagaagcc tagggctggg ggagacagcc ctgtctggga
1800
gggggcgttg ggtggcctct ggtatttatt tggcatttat aaatatataa actccttttt
1860
tactctagtc gacctgggcc tttcccttct ttccaaattt
1900
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<210> 6128
<211> 530
<212> PRT
<213> Homo sapiens
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<400> 6128
Val Ser Trp Ile Thr Gly Gln Ala Xaa Glu Ile Gly Ser Xaa Ser Leu
1               5                   10                  15
Thr Ile Leu Val Glu Cys Trp Asp Gly His Leu Thr Pro Pro Glu Val
            20                  25                  30
Ala Ser Leu Ala Asp Arg Ala Ser Arg Ala Arg Asp Ser Asn Met Val
            35                  40                  45
Arg Ala Ala Ala Glu Leu Ala Leu Ser Cys Leu Pro His Ala His Ala
        50                  55                  60
Leu Asn Pro Asn Glu Ile Gln Arg Ala Leu Val Gln Cys Lys Glu Gln
65                  70                  75                  80
Asp Asn Leu Met Leu Glu Lys Ala Cys Met Ala Val Glu Glu Ala Ala
                85                  90                  95
Lys Gly Gly Gly Val Tyr Pro Glu Val Leu Phe Glu Val Ala His Gln
            100                 105                 110
Trp Phe Trp Leu Tyr Glu Gln Thr Ala Gly Gly Ser Ser Thr Ala Arg
            115                 120                 125
Glu Gly Ala Thr Ser Cys Ser Ala Ser Gly Ile Arg Ala Gly Gly Glu
            130                 135                 140
Ala Gly Arg Gly Met Pro Glu Gly Arg Gly Gly Pro Gly Thr Glu Pro
145                 150                 155                 160
Val Thr Val Ala Ala Ala Val Thr Ala Ala Ala Thr Val Val Pro
                165                 170                 175
Val Ile Ser Val Gly Ser Ser Leu Tyr Pro Gly Pro Gly Leu Gly His
                180                 185                 190
Gly His Ser Pro Gly Leu His Pro Tyr Thr Ala Leu Gln Pro His Leu
            195                 200                 205
Pro Cys Ser Pro Gln Tyr Leu Thr His Pro Ala His Pro Ala His Pro
        210                 215                 220
Met Pro His Met Pro Arg Pro Ala Val Phe Pro Val Pro Ser Ser Ala
225                 230                 235                 240
Tyr Pro Gln Gly Val His Pro Ala Phe Leu Gly Ala Gln Tyr Pro Tyr
                245                 250                 255
Ser Val Thr Pro Pro Ser Leu Ala Ala Thr Ala Val Ser Phe Pro Val
```

```
            260                 265                 270
Pro Ser Met Ala Pro Ile Thr Val His Pro Tyr His Thr Glu Pro Gly
        275                 280                 285
Leu Pro Leu Pro Thr Ser Val Ala Cys Glu Leu Trp Gly Gln Gly Thr
        290                 295                 300
Val Ser Ser Val His Pro Ala Ser Thr Phe Pro Ala Ile Gln Gly Ala
305                 310                 315                 320
Ser Leu Pro Ala Leu Thr Thr Gln Pro Ser Pro Leu Val Ser Gly Gly
                325                 330                 335
Phe Pro Pro Pro Glu Glu Glu Thr His Ser Gln Pro Val Asn Pro His
                340                 345                 350
Ser Leu His His Leu His Ala Ala Tyr Arg Val Gly Met Leu Ala Leu
        355                 360                 365
Glu Met Leu Gly Arg Arg Ala His Asn Asp His Pro Asn Asn Phe Ser
        370                 375                 380
Arg Ser Pro Pro Tyr Thr Asp Asp Val Lys Trp Leu Leu Gly Leu Ala
385                 390                 395                 400
Ala Lys Leu Gly Val Asn Tyr Val His Gln Phe Cys Val Gly Ala Ala
                405                 410                 415
Lys Gly Val Leu Ser Pro Phe Val Leu Gln Glu Ile Val Met Glu Thr
                420                 425                 430
Leu Gln Arg Leu Ser Pro Ala His Ala His Asn His Leu Arg Ala Pro
        435                 440                 445
Ala Phe His Gln Leu Val Gln Arg Cys Gln Gln Ala Tyr Met Gln Tyr
        450                 455                 460
Ile His His Arg Leu Ile His Leu Thr Pro Ala Asp Tyr Asp Asp Phe
465                 470                 475                 480
Val Asn Ala Ile Arg Ser Ala Arg Ser Ala Phe Cys Leu Thr Pro Met
                485                 490                 495
Gly Met Met Gln Phe Asn Asp Ile Leu Gln Asn Leu Lys Arg Ser Lys
        500                 505                 510
Gln Thr Lys Glu Leu Trp Gln Arg Val Ser Leu Glu Met Ala Thr Phe
        515                 520                 525
Ser Pro
    530
```

```
<210> 6129
<211> 2012
<212> DNA
<213> Homo sapiens

<400> 6129
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cctacccgga agtggccccg acccccctcc ccccgtcccg gcctcccacg cacgggggggg
120
ggggggggggg gggctgatcg gcgctaccgg attggacaac ttggcatggg gcgggggcctc
180
tgggaggcgt ggcctccggc cggctcctct gctgttgcca agggaaactg ccgcgaggag
240
gcggaaggag cagaggaccg gcagccggcg tcgaggcggg gcgcgggaac gacggcggcc
300
atggcggcct cggggcccgg gtgtcgcagc tggtgcttgt gtcccgaggt gccatccgcc
360
```

```
accttcttca ctgcgctgct ctcgctgctg gtttccgggc ctcgcctgtt cctgctgcag
420
cagcccctgg cgccctcggg cctcacgctg aagtccgagg cccttcgcaa ctggcaagtt
480
tacaggctgg taacctacat ctttgtctac gagaatccca tctccctgct ctgcggcgct
540
atcatcatct ggcgctttgc tggcaatttc gagagaaccg tgggcaccgt ccgccactgc
600
ttcttcaccg tgatcttcgc catcttctcc gctatcatct tcctgtcatt cgaggctgtg
660
tcatcactgt caaagctggg ggaagtggag gatgccagag gtttcacccc agtggccttt
720
gccatgctgg gagtcaccac cgtccgttct cggatgaggc gggccctggt gtttggcatg
780
gttgtgccct cagtcctggt tccgtggctc ctgctgggtg cctcgtggct cattccccag
840
acctctttcc tcagtaatgt ctgcgggctg tccatcgggc tggcctatgg cctcacctac
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960
agcctgatga ggaggatatc cgtgttcaag tacgtctcag ggtcttcagc cgagaggagg
1020
gcagcccaga gccggaaact gaacccggtg cctggctcct accccacaca gagctgccac
1080
cctcacctgt ccccaagcca ccctgtgtcc cagacgcagc acgccagtgg tcagaagctg
1140
gcctcctggc cctcctgcac ccccgggcac atgcccacct tgcctccgta ccagcctgcc
1200
tccggcctgt gctatgtgca gaaccacttt ggtccaaacc ccacctcctc cagtgtctac
1260
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acggtgtatt ctggggcctt gggcacacca ggggctgcag gctccaagga gtcctccagg
1380
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1440
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1560
gtacggtgta ctggcccagc ttacagatgc agaaagcgag acgttctgcc atcagataaa
1620
gtcacgtggc tctttagtaa cacggacaag gctcctcgcc aaggaactcg tggcagaaga
1680
gggcagcagt tggcagtagc tgccgatgtc tgtccccagc tccaccattc ctccctgtgg
1740
ctgtgccgtg ctcgtggttt cagtgtccgt gtgtccatgt gtctgccctt caggagctcg
1800
cagctggtgt gcttggcggt cccaggcctg tgtagtgtct ctccctgct gcgggcgccc
1860
ccacccccgat tcctctcccc agaagcggtg ggatgggccc ccatgaactg cagcagcatg
1920
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1980
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
2012

<210> 6130
<211> 364
<212> PRT
<213> Homo sapiens

<400> 6130
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Val Pro Ser Ala Thr Phe Phe Thr Ala Leu Leu Ser Leu Leu Val Ser
            20                  25                  30
Gly Pro Arg Leu Phe Leu Leu Gln Gln Pro Leu Ala Pro Ser Gly Leu
        35                  40                  45
Thr Leu Lys Ser Glu Ala Leu Arg Asn Trp Gln Val Tyr Arg Leu Val
    50                  55                  60
Thr Tyr Ile Phe Val Tyr Glu Asn Pro Ile Ser Leu Leu Cys Gly Ala
65                  70                  75                  80
Ile Ile Ile Trp Arg Phe Ala Gly Asn Phe Glu Arg Thr Val Gly Thr
                85                  90                  95
Val Arg His Cys Phe Phe Thr Val Ile Phe Ala Ile Phe Ser Ala Ile
            100                 105                 110
Ile Phe Leu Ser Phe Glu Ala Val Ser Ser Leu Ser Lys Leu Gly Glu
        115                 120                 125
Val Glu Asp Ala Arg Gly Phe Thr Pro Val Ala Phe Ala Met Leu Gly
    130                 135                 140
Val Thr Thr Val Arg Ser Arg Met Arg Arg Ala Leu Val Phe Gly Met
145                 150                 155                 160
Val Val Pro Ser Val Leu Val Pro Trp Leu Leu Leu Gly Ala Ser Trp
                165                 170                 175
Leu Ile Pro Gln Thr Ser Phe Leu Ser Asn Val Cys Gly Leu Ser Ile
            180                 185                 190
Gly Leu Ala Tyr Gly Leu Thr Tyr Cys Tyr Ser Ile Asp Leu Ser Glu
        195                 200                 205
Arg Val Ala Leu Lys Leu Asp Gln Thr Phe Pro Phe Ser Leu Met Arg
    210                 215                 220
Arg Ile Ser Val Phe Lys Tyr Val Ser Gly Ser Ser Ala Glu Arg Arg
225                 230                 235                 240
Ala Ala Gln Ser Arg Lys Leu Asn Pro Val Pro Gly Ser Tyr Pro Thr
                245                 250                 255
Gln Ser Cys His Pro His Leu Ser Pro Ser His Pro Val Ser Gln Thr
            260                 265                 270
Gln His Ala Ser Gly Gln Lys Leu Ala Ser Trp Pro Ser Cys Thr Pro
        275                 280                 285
Gly His Met Pro Thr Leu Pro Pro Tyr Gln Pro Ala Ser Gly Leu Cys
    290                 295                 300
Tyr Val Gln Asn His Phe Gly Pro Asn Pro Thr Ser Ser Ser Val Tyr
305                 310                 315                 320
Pro Ala Ser Ala Gly Thr Ser Leu Gly Ile Gln Pro Pro Thr Pro Val
                325                 330                 335
Asn Ser Pro Gly Thr Val Tyr Ser Gly Ala Leu Gly Thr Pro Gly Ala
            340                 345                 350
Ala Gly Ser Lys Glu Ser Ser Arg Val Pro Met Pro
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5308

```
         355                    360
```

<210> 6131
<211> 3526
<212> DNA
<213> Homo sapiens

<400> 6131
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gacagcgggg aaatagacag acggttggaa aaaaaactga agatcacaca aaaagagagc
120
aggaaatcca aatctcctcc caaagtgccc attgtgattc aggacgatag ccttcccgcg
180
gggccccctc cacagatccg catcctcaag aggcccacca gcaacggtgt ggtcagcagc
240
cccaactcca ccagcaggcc caccctttcca gtcaagtccc tagcacagcg agaggccgag
300
tacgccgagg cccggaagcg gatcctgggc agcgccagcc ccgaggagga gcaggagaaa
360
cccatcctcg acaggtcttc ctctgatctt cttcccttca ggccaaccag gatctcccaa
420
cccgaagaca gcaggcagcc caataatgtg atcagacagc ctttgggtcc tgatgggtca
480
cacggcttca aacagcgcag ataaatgcag gcaagaaaag atgccgccgt tgctgccgtc
540
accgcctcct gggtcgtccg ccacgggttg cactgccgtg gcagacagct ggacttgagc
600
agagggaacg acctgactta cttgcactgt gatccccctt gctccgccca ctgtgacctt
660
gaaccccatg cactgtgacc tcccccctc tcccccttcc cactgtgatt ggcacatcga
720
caagggctgt cccaagtcaa tggaaaggga aagggtgggg gttaggggaa ggttgggggg
780
acccagcaag gactcagaga gtcagacagt gccacttggc cacttggggt aaagccagtg
840
ccagcaataa cagtttatca tgctcattaa tttgggattt caaaacacaa atgaaaactc
900
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960
tatcctttct ttttttttc ttcctatttt tgtttgttta tacaaatatc tgatttgcaa
1020
gaaaaagtgc atgggagggg ttttagtggt ttaatgaatt tttaattaag aaagggtagt
1080
ttggtagtct acttaaaaat gtttctggga aattcactag aaacattaac caataggatt
1140
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1200
cgccaggaca gacgagcacc ccatgcctat acctccctcc ccgagctaag tcccagggca
1260
tctgggcctt gcctggagac tgggctagct ctgtaggctc· ggagagcctg gggagggtgc
1320
caacccacc tctagtattt tgggagatag ggaaagtgaa ccgacttccc cttcccatac
1380
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5309

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ccctcagggt ggttccctac cagccaggct tactacttct agaagaaagc agagtgccag
1440
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1500
ccatcagcac aaggaaaacc aggagagagt ctgcctccag gactctgagc cttctgcctc
1560
gtatgttcag aaggtggata ggtcttccca ctccagcatg gcttgaactc ttaggggtct
1620
gcagtgctcc atctccattg gtggccccag ctcagtaact atacctggta catttcctgt
1680
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1920
cctggctcct ctcaggcttc ctgatccctt ccattgcact gcgccttatc cctcagccag
1980
ccagacagcc tccctgctcc tgaccagcag atacgtttcg gagtggttgg tgtggttttt
2040
gtgatgaggg cagcacgtgg tggccaaggt gacaagctga gtctcacagg ctcactccct
2100
cgttggttcc ctgtgggaat ggtaggccag gcccagtaag ccatgcccca acacgtcctc
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2220
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2280
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2340
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2400
gtttcccgcc caaagtgaga cttttccttttt aattggagaa gggtatagag gtagtccagg
2460
tgggaacgcc agaagtgctg attgcccagc cattgggacc acctgttctt gccccactac
2520
cctctagtgg gaggccaaag taaaggctgg ctggtgggtg tctgtggatt gaggatgtgg
2580
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2640
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2700
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2760
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2820
ctaagtgctt ttttttccttt tctttttttaa agtaagttgc aggctttggc ttggaaaacc
2880
ccaggggggat gggggggcagg aacctgaggc tgctgcccct ttatctgcct tcacggtact
2940
gtccccttcc cccagctcct ccctgacccc atgggccagg cctcagacct tccagctaac
3000
```

5310

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cgcttcccat gagccactac tctgatgtca gcctataacc aaaggagctg gggggtccag
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gcctggtgac caacctttct cagcccactc aatcagggtg ctccccacct gcaggcagga
3120
ggcaacaccc tatctgctac catcagcccc ttccagagcc catctgcccc gcccagccct
3180
gccctgccca gccataccct gctctgcccc atctgggggt gccctgctca gggatgggct
3240
ggcagggctg tacccagcct ccctggtaag cagagactca agaaacctct ggggtcctgt
3300
tttctggtcg tgtgatccca ggggtgcaca tgggcccctt gggtgtctga acagaagggc
3360
atgggaggga gggctgcacc cctgcagtct tactctgctg gtgtagcggg cagctgccca
3420
ctcccacccc accctgcacc gcgggctcct gagtcggcag attaagcatt ttataaattg
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3526
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<210> 6132
<211> 167
<212> PRT
<213> Homo sapiens

<400> 6132

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Xaa Gly Ala Ala Ser Lys Met Glu Asp Glu Glu Val Ala Glu Ser Trp
 1               5                   10                  15
Glu Glu Ala Ala Asp Ser Gly Glu Ile Asp Arg Arg Leu Glu Lys Lys
            20                  25                  30
Leu Lys Ile Thr Gln Lys Glu Ser Arg Lys Ser Lys Ser Pro Pro Lys
        35                  40                  45
Val Pro Ile Val Ile Gln Asp Asp Ser Leu Pro Ala Gly Pro Pro Pro
    50                  55                  60
Gln Ile Arg Ile Leu Lys Arg Pro Thr Ser Asn Gly Val Val Ser Ser
65                  70                  75                  80
Pro Asn Ser Thr Ser Arg Pro Thr Leu Pro Val Lys Ser Leu Ala Gln
                85                  90                  95
Arg Glu Ala Glu Tyr Ala Glu Ala Arg Lys Arg Ile Leu Gly Ser Ala
            100                 105                 110
Ser Pro Glu Glu Glu Gln Glu Lys Pro Ile Leu Asp Arg Ser Ser Ser
            115                 120                 125
Asp Leu Leu Pro Phe Arg Pro Thr Arg Ile Ser Gln Pro Glu Asp Ser
        130                 135                 140
Arg Gln Pro Asn Asn Val Ile Arg Gln Pro Leu Gly Pro Asp Gly Ser
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His Gly Phe Lys Gln Arg Arg
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<210> 6133
<211> 4156
<212> DNA
<213> Homo sapiens

<400> 6133

5311

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120
ccgcccgcca tggccaccaa ggctcgggtt atgtatgatt ttgctgctga acctggaaat
180
aatgaactga cggttaatga aggagaaatc atcacaatca caaatccgga tgtaggtgga
240
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300
gaaatttac ccagtgatgg aaaagatcaa ttttcttgtg gaaattcagt ggctgaccaa
360
gccttccttg attctctctc agccagcaca gctcaggcca gttcgtcggc tgccagcaac
420
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480
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540
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600
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720
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1560
gtggcagaac agccaaagaa agatctccat ttcctgatgg aatgtaatca cgagtataaa
1620
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5312

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ggttttcttg gctgcttccc tgacatcatt ggcactcaca agggagcaat agaaaaagtg
1680
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1740
gtgaagagag tcagcatcat gtcttacgcg ttgcaagctg agatgaatca ctttcacagt
1800
aaccggatct atgattacaa cagtgtcatc cgcctgtacc tggagcagca agtgcaattt
1860
tacgaaacga ttgcagaaaa gctgaggcag gccctcagcc gctttccagt gatgtaggac
1920
agaacgggcc ttgaagagaa tgccgcgtgc tttctcctga cttggggcaa tgcaattcaa
1980
aacttttttt cccctattat tcagaaaaaa aaggaaacaa aaccaaaaag aaagagttgc
2040
aaaaaactgc atttatttta ttagccaccc taaatgcgtc agttatttag ggatggtctt
2100
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2160
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2220
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2280
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2340
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2700
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2760
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3120
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3180
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3240
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5313

cacaggtgcc ttaccgcgtt ccctcccgct gctttcattt ttctgaccta ataattacgg
3300
gaaatggaaa gtctgggcca gcatcaataa aatgacacca aaaataagta gatgaaatca
3360
aatgaatatg agaacatctt gttcttcaat atcacgggtt tttgttaatg tttcataagt
3420
aattctcccc acttgatttt tcttctataa aatcccatag aacaatgttt atgctatagc
3480
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3540
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3600
cacttttca aaacacttt tggactttgt gtgtgatttt tgttgttgtt gttaagtact
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3840
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3900
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3960
gaatccacgg gatttgatgc ctggaagatt ctccttcaag tggcaacatg gcatatatat
4020
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4156

<210> 6134
<211> 595
<212> PRT
<213> Homo sapiens

<400> 6134
Met Ala Thr Lys Ala Arg Val Met Tyr Asp Phe Ala Ala Glu Pro Gly
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Asn Asn Glu Leu Thr Val Asn Glu Gly Glu Ile Ile Thr Ile Thr Asn
                20   25   30
Pro Asp Val Gly Gly Gly Trp Leu Glu Gly Arg Asn Ile Lys Gly Glu
            35   40   45
Arg Gly Leu Val Pro Thr Asp Tyr Val Glu Ile Leu Pro Ser Asp Gly
        50   55   60
Lys Asp Gln Phe Ser Cys Gly Asn Ser Val Ala Asp Gln Ala Phe Leu
65   70   75   80
Asp Ser Leu Ser Ala Ser Thr Ala Gln Ala Ser Ser Ser Ala Ala Ser
                85   90   95
Asn Asn His Gln Val Gly Ser Gly Asn Asp Pro Trp Ser Ala Trp Ser
            100   105   110
Ala Ser Lys Ser Gly Asn Trp Glu Ser Ser Glu Gly Trp Gly Ala Gln

```
              115                    120                    125
     Pro Glu Gly Ala Gly Ala Gln Arg Asn Thr Asn Thr Pro Asn Asn Trp
         130                    135                    140
     Asp Thr Ala Phe Gly His Pro Gln Ala Tyr Gln Gly Pro Ala Thr Gly
     145                    150                    155                    160
     Asp Asp Asp Asp Trp Asp Glu Asp Trp Asp Gly Pro Lys Ser Ser Ser
                        165                    170                    175
     Tyr Phe Lys Asp Ser Glu Ser Ala Asp Ala Gly Gly Ala Gln Arg Gly
                    180                    185                    190
     Asn Ser Arg Ala Ser Ser Ser Ser Met Lys Ile Pro Leu Asn Lys Phe
                195                    200                    205
     Pro Gly Phe Ala Lys Pro Gly Thr Glu Gln Tyr Leu Leu Ala Lys Gln
         210                    215                    220
     Leu Ala Lys Pro Lys Glu Lys Ile Pro Ile Ile Val Gly Asp Tyr Gly
     225                    230                    235                    240
     Pro Met Trp Val Tyr Pro Thr Ser Thr Phe Asp Cys Val Val Ala Asp
                        245                    250                    255
     Pro Arg Lys Gly Ser Lys Met Tyr Gly Leu Lys Ser Tyr Ile Glu Tyr
                    260                    265                    270
     Gln Leu Thr Pro Thr Asn Thr Asn Arg Ser Val Asn His Arg Tyr Lys
                275                    280                    285
     His Phe Asp Trp Leu Tyr Glu Arg Leu Leu Val Lys Phe Gly Ser Ala
         290                    295                    300
     Ile Pro Ile Pro Ser Leu Pro Asp Lys Gln Val Thr Gly Arg Phe Glu
     305                    310                    315                    320
     Glu Glu Phe Ile Lys Met Arg Met Glu Arg Leu Gln Ala Trp Met Thr
                        325                    330                    335
     Arg Met Cys Arg His Pro Val Ile Ser Glu Ser Glu Val Phe Gln Gln
                340                    345                    350
     Phe Leu Asn Phe Arg Asp Glu Lys Glu Trp Lys Thr Gly Lys Arg Lys
                355                    360                    365
     Ala Glu Arg Asp Glu Leu Ala Gly Val Met Ile Phe Ser Thr Met Glu
         370                    375                    380
     Pro Glu Ala Pro Asp Leu Asp Leu Val Glu Ile Glu Gln Lys Cys Glu
     385                    390                    395                    400
     Ala Val Gly Lys Phe Thr Lys Ala Met Asp Asp Gly Val Lys Glu Leu
                        405                    410                    415
     Leu Thr Val Gly Gln Glu His Trp Lys Arg Cys Thr Gly Pro Leu Pro
                420                    425                    430
     Lys Glu Tyr Gln Lys Ile Gly Lys Ala Leu Gln Ser Leu Ala Thr Val
                435                    440                    445
     Phe Ser Ser Ser Gly Tyr Gln Gly Glu Thr Asp Leu Asn Asp Ala Ile
         450                    455                    460
     Thr Glu Ala Gly Lys Thr Tyr Glu Glu Ile Ala Ser Leu Val Ala Glu
     465                    470                    475                    480
     Gln Pro Lys Lys Asp Leu His Phe Leu Met Glu Cys Asn His Glu Tyr
                        485                    490                    495
     Lys Gly Phe Leu Gly Cys Phe Pro Asp Ile Ile Gly Thr His Lys Gly
                500                    505                    510
     Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr Ser Lys
         515                    520                    525
     Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser Ile Met
         530                    535                    540
     Ser Tyr Ala Leu Gln Ala Glu Met Asn His Phe His Ser Asn Arg Ile
```

5315

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        545                 550                 555                 560
        Tyr Asp Tyr Asn Ser Val Ile Arg Leu Tyr Leu Glu Gln Gln Val Gln
                        565                 570                 575
        Phe Tyr Glu Thr Ile Ala Glu Lys Leu Arg Gln Ala Leu Ser Arg Phe
                        580                 585                 590
        Pro Val Met
                595
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<210> 6135
<211> 526
<212> DNA
<213> Homo sapiens

<400> 6135
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tgctactaga aaagaccttg cttgaagagc catctcatca acatgttacg caggaaacac
120
aggccaaacc agggtatcag ccatctggag aatctgacaa agaaaacaaa gtacaggaac
180
gtcccccaag tgcgtcttcc agtagtgaca tgtctctctc agaacctcca cagcctcttg
240
caagaaaaga cttgatggaa tctacatgga tgcagcctga aagattgagc ccacaagttc
300
accattctca accacagcct tttgctggaa cagctggaag tttactctcc catctcttga
360
gtttagagca tgtaggaatt ttgcataagg attttgaatc tattttacca accaggaaga
420
atcataatat ggcttcaagg ccattaactt ttacacctca accatatgtg acctcaccag
480
ctgcttatac agatgccttg gtaaaaccta gtgccagcca atataa
526
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<210> 6136
<211> 105
<212> PRT
<213> Homo sapiens

<400> 6136
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Met Ser Leu Ser Glu Pro Pro Gln Pro Leu Ala Arg Lys Asp Leu Met
1               5                   10                  15
Glu Ser Thr Trp Met Gln Pro Glu Arg Leu Ser Pro Gln Val His His
                20                  25                  30
Ser Gln Pro Gln Pro Phe Ala Gly Thr Ala Gly Ser Leu Leu Ser His
            35                  40                  45
Leu Leu Ser Leu Glu His Val Gly Ile Leu His Lys Asp Phe Glu Ser
        50                  55                  60
Ile Leu Pro Thr Arg Lys Asn His Asn Met Ala Ser Arg Pro Leu Thr
65                  70                  75                  80
Phe Thr Pro Gln Pro Tyr Val Thr Ser Pro Ala Ala Tyr Thr Asp Ala
                85                  90                  95
Leu Val Lys Pro Ser Ala Ser Gln Tyr
            100                 105
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<210> 6137
<211> 2073
<212> DNA
<213> Homo sapiens

<400> 6137
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120
acgtggcgcc agcggaggca ggttgctgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctaagt taaagaaagc aagtaaacgc atgacctgcc ataagcggta taaaatccaa
240
aaaaaggttc gagaacatca tcgaaaatta agaaaggagg ctaaaaagca gggtcacaag
300
aagcctagga aagacccagg agttccaaac agtgctccct ttaaggaggc tcttcttagg
360
gaagctgagc taaggaaaca gaggcttgaa gaactaaaac agcagcagaa acttgacagg
420
cagaaggaac tagaaaagaa aagaaaactt gaaactaatc ctgatattaa gnccatcaaa
480
tgtggaaccn ntatggaaaa ggagtttggg ctttgcaaaa ctgagaacaa agccaagtcg
540
ggcaaacaga attcaaagaa gctgtactgc caagaactta aaaaggtgat tgaagcctcc
600
gatgttgtcc tagaggtgtt ggatgccaga gatcctcttg gttgcagatg tcctcaggta
660
gaagaggcca ttgtccagag tggacagaaa aagctggtac ttatattaaa taaatcagat
720
ctggtaccaa aggagaattt ggagagctgg ctaaattatt tgaagaaaga attgccaaca
780
gtggtgttca gagcctcaac aaaaccaaag gataaaggga agataaccaa gcgtgtgaag
840
gcaaagaaga atgctgctcc attcagaagt gaagtctgct ttgggaaaga gggcctttgg
900
aaacttcttg gaggttttca ggaaacttgc agcaaagcca ttcgggttgg agtaattggt
960
ttcccaaatg tggggaaaag cagcattatc aatagcttaa aacaagaaca gatgtgtaat
1020
gttggtgtat ccatggggct tacaaggagc atgcaagttg tccccttgga caaacagatc
1080
acaatcatag atagtccgag cttcatcgta tctccactta attcctcctc tgcgcttgct
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1260
ctggaatttt ttactgtgct tgctcagaga gagaggtatgc accaaaaagg tggaatccca
1320
aatgttgaag gtgctgccaa actgctgtgg tctgagtgga caggtgcctc attagcttac
1380
tattgccatc cccctacatc ttggactcct cctccatatt ttaatgagag tattgtggta
1440

5317

gacatgaaaa gcggcttcaa tctggaagaa ctggaaaaga acaatgcaca gagcataaga
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gccatcaagg gccctcattt ggccaatagc atccttttcc agtcttccgg tctgacaaat
1560
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1620
gaggagaggg aggatgacaa agacagtgac caggaaactg ttgatgaaga agttgatgaa
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aacagctcag gcatgtttgc tgcagaagag acaggggagg cactgtctga ggagactaca
1740
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1800
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1860
acattttaag cagactgcta aactgttctc tgtataagtt atggtatgca tgagctgtgt
1920
aaattttgtg aatatgtatt atattaaaac caggcaactt ggaatcccta aattctgtaa
1980
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2040
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2073

<210> 6138
<211> 550
<212> PRT
<213> Homo sapiens

<400> 6138
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            20   25   30
Arg Lys Glu Ala Lys Lys Gln Gly His Lys Lys Pro Arg Lys Asp Pro
            35   40   45
Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Arg Glu Ala
        50   55   60
Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys Leu
65   70   75   80
Asp Arg Gln Lys Glu Leu Glu Lys Lys Arg Lys Leu Glu Thr Asn Pro
                85   90   95
Asp Ile Lys Xaa Ile Lys Cys Gly Thr Xaa Met Glu Lys Glu Phe Gly
            100   105   110
Leu Cys Lys Thr Glu Asn Lys Ala Lys Ser Gly Lys Gln Asn Ser Lys
        115   120   125
Lys Leu Tyr Cys Gln Glu Leu Lys Lys Val Ile Glu Ala Ser Asp Val
        130   135   140
Val Leu Glu Val Leu Asp Ala Arg Asp Pro Leu Gly Cys Arg Cys Pro
145   150   155   160
Gln Val Glu Glu Ala Ile Val Gln Ser Gly Gln Lys Lys Leu Val Leu
                165   170   175
Ile Leu Asn Lys Ser Asp Leu Val Pro Lys Glu Asn Leu Glu Ser Trp
            180   185   190
Leu Asn Tyr Leu Lys Lys Glu Leu Pro Thr Val Val Phe Arg Ala Ser

5318

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         195                   200                   205
Thr Lys Pro Lys Asp Lys Gly Lys Ile Thr Lys Arg Val Lys Ala Lys
    210                   215                   220
Lys Asn Ala Ala Pro Phe Arg Ser Glu Val Cys Phe Gly Lys Glu Gly
225                   230                   235                   240
Leu Trp Lys Leu Leu Gly Gly Phe Gln Glu Thr Cys Ser Lys Ala Ile
                245                   250                   255
Arg Val Gly Val Ile Gly Phe Pro Asn Val Gly Lys Ser Ser Ile Ile
                260                   265                   270
Asn Ser Leu Lys Gln Glu Gln Met Cys Asn Val Gly Val Ser Met Gly
        275                   280                   285
Leu Thr Arg Ser Met Gln Val Val Pro Leu Asp Lys Gln Ile Thr Ile
        290                   295                   300
Ile Asp Ser Pro Ser Phe Ile Val Ser Pro Leu Asn Ser Ser Ser Ala
305                   310                   315                   320
Leu Ala Leu Arg Ser Pro Ala Ser Ile Glu Val Val Lys Pro Met Glu
                325                   330                   335
Ala Ala Ser Ala Ile Leu Ser Gln Ala Asp Ala Arg Gln Val Val Leu
                340                   345                   350
Lys Tyr Thr Val Pro Gly Tyr Arg Asn Ser Leu Glu Phe Phe Thr Val
        355                   360                   365
Leu Ala Gln Arg Arg Gly Met His Gln Lys Gly Gly Ile Pro Asn Val
        370                   375                   380
Glu Gly Ala Ala Lys Leu Leu Trp Ser Glu Trp Thr Gly Ala Ser Leu
385                   390                   395                   400
Ala Tyr Tyr Cys His·Pro Pro Thr Ser Trp Thr Pro Pro Tyr Phe
                405                   410                   415
Asn Glu Ser Ile Val Val Asp Met Lys Ser Gly Phe Asn Leu Glu Glu
                420                   425                   430
Leu Glu Lys Asn Asn Ala Gln Ser Ile Arg Ala Ile Lys Gly Pro His
        435                   440                   445
Leu Ala Asn Ser Ile Leu Phe Gln Ser Ser Gly Leu Thr Asn Gly Ile
    450                   455                   460
Ile Glu Glu Lys Asp Ile His Glu Glu Leu Pro Lys Arg Lys Glu Arg
465                   470                   475                   480
Lys Gln Glu Glu Arg Glu Asp Asp Lys Asp Ser Asp Gln Glu Thr Val
                485                   490                   495
Asp Glu Glu Val Asp Glu Asn Ser Ser Gly Met Phe Ala Ala Glu Glu
            500                   505                   510
Thr Gly Glu Ala Leu Ser Glu Glu Thr Thr Ala Gly Glu Gln Ser Thr
        515                   520                   525
Arg Ser Phe Ile Leu Asp Lys Ile Ile Glu Glu Asp Asp Ala Tyr Asp
    530                   535                   540
Phe Ser Thr Asp Tyr Val
545                   550
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<210> 6139
<211> 2249
<212> DNA
<213> Homo sapiens

<400> 6139
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acagacgatg atggccaggc cccggaggct aaggacggca gctcctttag cggcagagtt
180
ttccgagtga ccttcttgat gctggctgtt tctctcaccg ttcccctgct tggagccatg
240
atgctgctgg aatctcctat agatccacag cctctcagct tcaaagaacc cccgctcttg
300
cttggtgttc tgcatccaaa tacgaagctg cgacaggcag aaaggctgtt tgaaaatcaa
360
cttgttggac cggagtccat agcacatatt ggggatgtga tgtttactgg gacagcagat
420
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480
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540
gggcccaatg ggactctctt tgtggccgat gcatacaagg gactatttga agtaaatccc
600
tggaaacgtg aagtgaaact gctgctgtcc tccgagacac ccattgaggg gaagaacatg
660
tcctttgtga atgatcttac agtcactcag gatgggagga agatttattt caccgattct
720
agcagcaaat ggcaaagacg agactacctg cttctggtga tggagggcac agatgacggg
780
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840
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900
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960
gtggagaaca tgcctggatt tccagacaac atccggccca gcagctctgg ggggtactgg
1020
gtgggcatgt cgaccatccg ccctaaccct gggttttcca tgctggattt cttatctgag
1080
agaccctgga ttaaaaggat gattttaag ggaagctgcg ctggttgtga tctgctcttt
1140
agtcaagaga cggtgatgaa gtttgtgccg cggtacagcc tcgtcctaga actcagcgac
1200
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1260
gaggtgcacg aacacgatgg gcacctgtac ctgggctctt tcaggtcccc cttcctctgc
1320
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1380
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aagtgtccac atgcacctgt tagtccctga gaggtggtgg gaatggctgc ttcattcctc
1500
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1560
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5320

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<212> PRT
<213> Homo sapiens

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Leu Leu Leu Gly Val Leu His Pro Asn Thr Lys Leu Arg Gln Ala Glu
        35   40   45
Arg Leu Phe Glu Asn Gln Leu Val Gly Pro Glu Ser Ile Ala His Ile
    50   55   60
Gly Asp Val Met Phe Thr Gly Thr Ala Asp Gly Arg Val Val Lys Leu
65   70   75   80
Glu Asn Gly Glu Ile Glu Thr Ile Ala Arg Phe Xaa Phe Gly Pro Xaa
                85   90   95
Cys Lys Thr Arg Asp Asp Glu Pro Val Cys Gly Arg Pro Leu Gly Ile
            100   105   110
Arg Ala Gly Pro Asn Gly Thr Leu Phe Val Ala Asp Ala Tyr Lys Gly
        115   120   125
Leu Phe Glu Val Asn Pro Trp Lys Arg Glu Val Lys Leu Leu Leu Ser
    130   135   140
Ser Glu Thr Pro Ile Glu Gly Lys Asn Met Ser Phe Val Asn Asp Leu
145   150   155   160
Thr Val Thr Gln Asp Gly Arg Lys Ile Tyr Phe Thr Asp Ser Ser Ser
                165   170   175
Lys Trp Gln Arg Arg Asp Tyr Leu Leu Leu Val Met Glu Gly Thr Asp
            180   185   190
Asp Gly Arg Leu Leu Glu Tyr Asp Thr Val Thr Arg Glu Val Lys Val
        195   200   205
Leu Leu Asp Gln Leu Arg Phe Pro Asn Gly Val Gln Leu Ser Pro Ala

5321

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      Val Tyr Val Ser Gly Leu Met Lys Gly Gly Ala Asp Leu Phe Val Glu
                          245                     250                     255
      Asn Met Pro Gly Phe Pro Asp Asn Ile Arg Pro Ser Ser Ser Gly Gly
                      260                     265                     270
      Tyr Trp Val Gly Met Ser Thr Ile Arg Pro Asn Pro Gly Phe Ser Met
                  275              .      280                     285
      Leu Asp Phe Leu Ser Glu Arg Pro Trp Ile Lys Arg Met Ile Phe Lys
              290                     295                     300
      Gly Ser Cys Ala Gly Cys Asp Leu Leu Phe Ser Gln Glu Thr Val Met
      305                     310                     315                     320
      Lys Phe Val Pro Arg Tyr Ser Leu Val Leu Glu Leu Ser Asp Ser Gly
                          325                     330                     335
      Ala Phe Arg Arg Ser Leu His Asp Pro Asp Gly Leu Val Ala Thr Tyr
                      340                     345                     350
      Ile Ser Glu Val His Glu His Asp Gly His Leu Tyr Leu Gly Ser Phe
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<210> 6141
<211> 5651
<212> DNA
<213> Homo sapiens


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780
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2400
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5323

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5324

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5325

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5651

<210> 6142
<211> 513
<212> PRT
<213> Homo sapiens

<400> 6142
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Leu Leu Cys Ser Cys Cys Gly Pro Pro Pro Leu Arg Pro Pro Leu Pro
                20   25   30
Ala Ala Ala Ala Ala Ala Ala Gly Gly Gln Leu Leu Gly Asp Gly Gly
                35   40   45
Ser Pro Gly Arg Thr Glu Gln Pro Pro Ser Pro Gln Ser Ser Ser
        50   55   60
Gly Phe Leu Tyr Arg Arg Leu Lys Thr Gln Glu Lys Arg Glu Met Gln
65   70   75   80
Lys Glu Ile Leu Ser Val Leu Gly Leu Pro His Arg Pro Arg Pro Leu
                85   90   95
His Gly Leu Gln Gln Pro Gln Pro Pro Ala Leu Arg Gln Gln Glu Glu
            100   105   110
Gln Gln Gln Gln Gln Gln Leu Pro Arg Gly Glu Pro Pro Pro Gly Arg
            115   120   125
Leu Lys Ser Ala Pro Leu Phe Met Leu Asp Leu Tyr Asn Ala Leu Ser
        130   135   140
Ala Asp Asn Asp Glu Asp Gly Ala Ser Glu Gly Glu Arg Gln Gln Ser
145   150   155   160
Trp Pro His Glu Ala Ala Ser Ser Ser Gln Arg Arg Gln Pro Pro Pro
                165   170   175
Gly Ala Ala His Pro Leu Asn Arg Lys Ser Leu Leu Ala Pro Gly Ser
            180   185   190
Gly Ser Gly Gly Ala Ser Pro Leu Thr Ser Ala Gln Asp Ser Ala Phe
            195   200   205
Leu Asn Asp Ala Asp Met Val Met Ser Phe Val Asn Leu Val Glu Tyr
        210   215   220
Asp Lys Glu Phe Ser Pro Arg Gln Arg His His Lys Glu Phe Lys Phe
225   230   235   240
Asn Leu Ser Gln Ile Pro Glu Gly Gly Val Val Thr Ala Ala Glu Phe
                245   250   255
Arg Ile Tyr Lys Asp Cys Val Met Gly Ser Phe Lys Asn Gln Thr Phe
            260   265   270
Leu Ile Ser Ile Tyr Gln Val Leu Gln Glu His Gln His Arg Asp Ser
        275   280   285
Asp Leu Phe Leu Leu Asp Thr Arg Val Val Trp Ala Ser Glu Glu Gly
        290   295   300
Trp Leu Glu Phe Asp Ile Thr Ala Thr Ser Asn Leu Trp Val Val Thr
305   310   315   320
Pro Gln His Asn Met Gly Leu Gln Leu Ser Val Val Thr Arg Asp Gly
                325   330   335
Val His Val His Pro Arg Ala Ala Gly Leu Val Gly Arg Asp Gly Pro
                340   345   350
Tyr Asp Lys Gln Pro Phe Met Val Ala Phe Phe Lys Val Ser Glu Val

5326

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His Val Arg Thr Thr Arg Ser Ala Ser Ser Arg Arg Arg Gln Gln Ser
     370                    375                    380
Arg Asn Arg Ser Thr Gln Ser Gln Asp Val Ala Arg Val Ser Ser Ala
385                    390                    395                    400
Ser Asp Tyr Asn Ser Ser Glu Leu Lys Thr Ala Cys Arg Lys His Glu
                   405                    410                    415
Leu Tyr Val Ser Phe Gln Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala
                   420                    425                    430
Pro Lys Gly Tyr Ala Ala Asn Tyr Cys Asp Gly Glu Cys Ser Phe Pro
         435                    440                    445
Leu Asn Ala His Met Asn Ala Thr Asn His Ala Ile Val Gln Thr Leu
    450                    455                    460
Val His Leu Met Asn Pro Glu Tyr Val Pro Lys Pro Cys Cys Ala Pro
465                    470                    475                    480
Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe Asn Asp Asn Ser Lys
                   485                    490                    495
Ile Thr Leu Lys Lys Tyr Arg Asn Met Val Val Arg Ala Cys Gly Tyr
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Cys
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<210> 6143
<211> 1137
<212> DNA
<213> Homo sapiens
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120
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780
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<210> 6144
<211> 141
<212> PRT
<213> Homo sapiens

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             20   25   30
Ser Gly Ser Arg Gln Ala Trp Val His Pro Pro Ala Gln Pro Arg Thr
         35   40   45
Ala Gly Pro Glu Leu Gly Gly Gln Gly Ile Pro Ser Pro Gly Cys Ala
     50   55   60
Cys Gln Arg Gly Glu Ala Gly Gly Gly Gly Asn Ala Val Leu Pro Gln
65   70   75   80
Glu Ser Val Leu Arg Ala Ser Ala Val Gly Arg Gly Ala Glu Gly Pro
                 85   90   95
Gly Ala Leu Thr Arg Ser Gly Ser Gly Ala Ala Ser Ala Leu Val Arg
             100   105   110
Pro Gly Glu Lys Gly Cys Trp Cys Arg Thr Ala Ser Gly Ala Gly Pro
         115   120   125
Ser Gly Asp Arg Gly Pro Glu Val Gln Val Pro Gly Gly
     130   135   140

<210> 6145
<211> 766
<212> DNA
<213> Homo sapiens

<400> 6145
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300

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420
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766

<210> 6146
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6146
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            20   25   30
Ala Val Pro Thr Pro Glu Ala Gln Gln Gln Gln Val Lys Gln Pro Cys
            35   40   45
Gln Pro Pro Pro Val Lys Cys Gln Glu Thr Cys Ala Pro Lys Thr Lys
        50   55   60
Asp Pro Cys Ala Pro Gln Val Lys Lys Gln Cys Pro Pro Lys Asp Thr
65   70   75   80
Ile Ile Pro Ala Gln Gln Lys Cys Pro Ser Ala Gln Gln Ala Ser Lys
                85   90   95
Ser Lys Gln Lys
            100

<210> 6147
<211> 1852
<212> DNA
<213> Homo sapiens

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300

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600
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660
tttgcttgta aattccttag tgatactcag ttaaatagat acatcgaaaa gttgaccaat
720
gaaatgaaag aggctggaaa tttggaagga attttgctta caggccttac taaagatgga
780
gtggacttaa tggagagtta tgttgataga actggagatg ttcaaacagc aagttactgt
840
atgttacagg gttcaccttt agatgttctt aaagatgaaa gggttcagta ctggattgag
900
aattatagaa atttattaga tgcctggagg ttttggcata acgagctga atttgatatt
960
cacaggagta agttggatcc cagttccaag cctttagcac aagtttttgt gagttgcaat
1020
ttctgtggca agtcaatctc ctacagctgt tcagctgtgc ctcatcaggg cagaggtttt
1080
agtcagtatg gtgtgagtgg ctcaccaacg aaatctaaag tcacaagttg tcctggctgt
1140
cgaaaaccac ttcctcgatg tgcgctttgt ctcattaata tgggaacacc agtttctagc
1200
tgtcctggag gaaccaaatc agatgaaaaa gtggacttga gcaaggacaa aaaattagcc
1260
caatttaaca actggtttac atggtgtcat aattgcaggc acggtggaca tgctggacat
1320
atgcttagtt ggttcaggga ccatgcagag tgccctgtgt ctgcatgcac gtgtaaatgt
1380
atgcagttgg atacaacggg gaatctggta cctgcagaga ctgtccagcc ataaaatgtt
1440
accaccttaa gagaacccct caagtgtgga gctttctagt aggtgtcctt catagctcag
1500
aaacatacct cagaacaagc cattcatgac ttacctgtaa tgggaaaata aatcattcta
1560
tcagatcagc agttttgatg tttgagtgat tttgatatgc ttcacagaga caaatgctgc
1620
caaaataaac atcgaagtat agacatgagt tctgttcagc aggttgaaaa gtctgattta
1680
gaaaaacttt ctaagttttg gttgaaatta tgaacactct agaagcagaa tttctggaag
1740
agccaagaac agactttgag cctatatctt caaagctgaa actggatatc tttcaataaa
1800
atatgtgcac ttttaaaata aaaaaaaaaa aaaaaaaaa aaaaaaaaaa aa
1852
```

<210> 6148

<211> 410
<212> PRT
<213> Homo sapiens

<400> 6148
Met Val Glu Ser Ser Arg His Asn Trp Ser Gly Leu Asp Lys Gln Ser
1   5   10   15
Asp Ile Gln Asn Leu Asn Glu Glu Arg Ile Leu Ala Leu Gln Leu Cys
                20   25   30
Gly Trp Ile Lys Lys Gly Thr Asp Val Asp Val Gly Pro Phe Leu Asn
            35   40   45
Ser Leu Val Gln Glu Gly Glu Trp Glu Arg Ala Ala Ala Val Ala Leu
        50   55   60
Phe Asn Leu Asp Ile Arg Arg Ala Ile Gln Ile Leu Asn Glu Gly Ala
65   70   75   80
Ser Ser Glu Lys Gly Asp Leu Asn Leu Asn Val Val Ala Met Ala Leu
                85   90   95
Ser Gly Tyr Thr Asp Glu Lys Asn Ser Leu Trp Arg Glu Met Cys Ser
            100   105   110
Thr Leu Arg Leu Gln Leu Asn Asn Pro Tyr Leu Cys Val Met Phe Ala
        115   120   125
Phe Leu Thr Ser Glu Thr Gly Ser Tyr Asp Gly Val Leu Tyr Glu Asn
    130   135   140
Lys Val Ala Val Arg Asp Arg Val Ala Phe Ala Cys Lys Phe Leu Ser
145   150   155   160
Asp Thr Gln Leu Asn Arg Tyr Ile Glu Lys Leu Thr Asn Glu Met Lys
                165   170   175
Glu Ala Gly Asn Leu Glu Gly Ile Leu Leu Thr Gly Leu Thr Lys Asp
            180   185   190
Gly Val Asp Leu Met Glu Ser Tyr Val Asp Arg Thr Gly Asp Val Gln
        195   200   205
Thr Ala Ser Tyr Cys Met Leu Gln Gly Ser Pro Leu Asp Val Leu Lys
    210   215   220
Asp Glu Arg Val Gln Tyr Trp Ile Glu Asn Tyr Arg Asn Leu Leu Asp
225   230   235   240
Ala Trp Arg Phe Trp His Lys Arg Ala Glu Phe Asp Ile His Arg Ser
            245   250   255
Lys Leu Asp Pro Ser Ser Lys Pro Leu Ala Gln Val Phe Val Ser Cys
            260   265   270
Asn Phe Cys Gly Lys Ser Ile Ser Tyr Ser Cys Ser Ala Val Pro His
        275   280   285
Gln Gly Arg Gly Phe Ser Gln Tyr Gly Val Ser Gly Ser Pro Thr Lys
    290   295   300
Ser Lys Val Thr Ser Cys Pro Gly Cys Arg Lys Pro Leu Pro Arg Cys
305   310   315   320
Ala Leu Cys Leu Ile Asn Met Gly Thr Pro Val Ser Ser Cys Pro Gly
            325   330   335
Gly Thr Lys Ser Asp Glu Lys Val Asp Leu Ser Lys Asp Lys Lys Leu
            340   345   350
Ala Gln Phe Asn Asn Trp Phe Thr Trp Cys His Asn Cys Arg His Gly
        355   360   365
Gly His Ala Gly His Met Leu Ser Trp Phe Arg Asp His Ala Glu Cys
    370   375   380
Pro Val Ser Ala Cys Thr Cys Lys Cys Met Gln Leu Asp Thr Thr Gly

```
385                  390                  395                  400
Asn Leu Val Pro Ala Glu Thr Val Gln Pro
                405                  410
```

<210> 6149
<211> 1949
<212> DNA
<213> Homo sapiens

<400> 6149

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nggccgcggg ctgcatgggc agcgcccgcg ccccgccgct gagccgtcgc ggagccgcgc
60
agccctcgga gcacgaatat atacagccct gctctgggac acacctccat tggatttaaa
120
agacagtcct cgtcagcact gactttcagc tatggaatcg cagacggttg atgatgaagc
180
gccggccgtg taaatgaaga tcgggtgagg agcaggacga tgcccaaggg tgggtgccct
240
aaagcaccac agcaggaaga gcttcccctc agcagcgaca tggtggagaa gcagactggg
300
aaaaaggata aagataaagt ttctctaacc aagaccccaa aactggagcg tggcgatggc
360
gggaaggagg tgagggagcg agccagcaag cggaagctgc ccttcaccgc gggcgccaat
420
ggggagcaga aggactcgga cacagagaag cagggccctg agcggaagag gattaagaag
480
gagcctgtca cccggaaggc cgggctgctg tttggcatgg ggctgtctgg aatccgagcc
540
ggctacccccc tctccgagcg ccagcaggtg gcccttctca tgcagatgac ggccgaggag
600
tctgccaaca gcccagtgga cacaacacca aagcacccct cccagtctac agtgtgtcag
660
aagggaacgc ccaactctgc ctcaaaaacc aaagataaac tgaacaagag aaacgagcgt
720
ggagagaccc gcctgcaccg agccgccatc cgcggggacg cccggcgcat caaagagctc
780
atcagcgagg gggcagacgt caacgtcaag gacttcgcag gctggacggc gctgcacgag
840
gcctgtaacc ggggctacta cgacgtcgcg aagcagctgc tggctgcagg tgcggaggtg
900
aacaccaagg gcctagatga cgacacgcct ttgcacgacg ctgccaacaa cgggcactac
960
aaggtggtga agctgctgct gcggtacgga gggaacccgc agcagagcaa caggaaaggc
1020
gagacgccgc tgaaagtggc caactccccc acgatggtga acctcctgtt aggcaaaggc
1080
acttacactt ccagcgagga gagctcgacg gagâgctcag aagaggaaga cgcaccatcc
1140
ttcgcacctt ccagttcagt cgacggcaac aacacggact ccgagttcga aaaaggcctc
1200
aagcacaagg ccaagaaccc agagccacag aaggccacgg cccccgtcaa ggacgagtat
1260
gagtttgatg aggacgacga gcaggacagg gttcctccgg tggacgacaa gcacctattg
1320
```

aaaaaggact acagaaaaga aacgaaatcc aatagtttta tctctatacc caaaatggag
1380
gttaaaagtt acactaaaaa taacacgatt gcaccaaaga aagcgtccca tcgtatcctg
1440
tcagacacgt cggacgagga ggacgcgagt gtcaccgtgg ggacaggaga gaagctgaga
1500
ctctcggcac atacgatatt gcctggtagt aagacacgag agccttctaa tgccaagcag
1560
cagaaggaaa aaaataaagt gaaaaagaag cgaaagaaag aaacaaaagg cagagaggtt
1620
cgcttcggaa agcggagcna tagttctgct cctcggagtc ggagagcgag tcctcagaga
1680
gtggggagga tgacagggac tctctgggga gctctggctg cctcaagggg tccccgctgg
1740
tgctgaagga cccctccctg ttcagctccc tctctgcctc ctccacctcg tctcacggga
1800
gctctgccgc ccagaagcag aacccagcc acacagacca gcacaccaag cactggcgga
1860
cagacaattg gaaaaccatt tcttccccgg cttggtcaga ggtcagttct ttatcagact
1920
ccacaaggac gagactgaca agcgagtct
1949

<210> 6150
<211> 508
<212> PRT
<213> Homo sapiens

<400> 6150
Met Pro Lys Gly Gly Cys Pro Lys Ala Pro Gln Gln Glu Glu Leu Pro
1   5   10   15
Leu Ser Ser Asp Met Val Glu Lys Gln Thr Gly Lys Lys Asp Lys Asp
            20   25   30
Lys Val Ser Leu Thr Lys Thr Pro Lys Leu Glu Arg Gly Asp Gly Gly
        35   40   45
Lys Glu Val Arg Glu Arg Ala Ser Lys Arg Lys Leu Pro Phe Thr Ala
    50   55   60
Gly Ala Asn Gly Glu Gln Lys Asp Ser Asp Thr Glu Lys Gln Gly Pro
65   70   75   80
Glu Arg Lys Arg Ile Lys Lys Glu Pro Val Thr Arg Lys Ala Gly Leu
                85   90   95
Leu Phe Gly Met Gly Leu Ser Gly Ile Arg Ala Gly Tyr Pro Leu Ser
                100   105   110
Glu Arg Gln Gln Val Ala Leu Leu Met Gln Met Thr Ala Glu Glu Ser
            115   120   125
Ala Asn Ser Pro Val Asp Thr Thr Pro Lys His Pro Ser Gln Ser Thr
        130   135   140
Val Cys Gln Lys Gly Thr Pro Asn Ser Ala Ser Lys Thr Lys Asp Lys
145   150   155   160
Leu Asn Lys Arg Asn Glu Arg Gly Glu Thr Arg Leu His Arg Ala Ala
                165   170   175
Ile Arg Gly Asp Ala Arg Arg Ile Lys Glu Leu Ile Ser Glu Gly Ala
                180   185   190
Asp Val Asn Val Lys Asp Phe Ala Gly Trp Thr Ala Leu His Glu Ala

5333

```
            195                    200                    205
Cys Asn Arg Gly Tyr Tyr Asp Val Ala Lys Gln Leu Leu Ala Ala Gly
    210                    215                    220
Ala Glu Val Asn Thr Lys Gly Leu Asp Asp Asp Thr Pro Leu His Asp
225                    230                    235                    240
Ala Ala Asn Asn Gly His Tyr Lys Val Val Lys Leu Leu Leu Arg Tyr
                245                    250                    255
Gly Gly Asn Pro Gln Gln Ser Asn Arg Lys Gly Glu Thr Pro Leu Lys
                260                    265                    270
Val Ala Asn Ser Pro Thr Met Val Asn Leu Leu Leu Gly Lys Gly Thr
            275                    280                    285
Tyr Thr Ser Ser Glu Glu Ser Ser Thr Glu Ser Ser Glu Glu Glu Asp
        290                    295                    300
Ala Pro Ser Phe Ala Pro Ser Ser Ser Val Asp Gly Asn Asn Thr Asp
305                    310                    315                    320
Ser Glu Phe Glu Lys Gly Leu Lys His Lys Ala Lys Asn Pro Glu Pro
                325                    330                    335
Gln Lys Ala Thr Ala Pro Val Lys Asp Glu Tyr Glu Phe Asp Glu Asp
            340                    345                    350
Asp Glu Gln Asp Arg Val Pro Pro Val Asp Asp Lys His Leu Leu Lys
            355                    360                    365
Lys Asp Tyr Arg Lys Glu Thr Lys Ser Asn Ser Phe Ile Ser Ile Pro
        370                    375                    380
Lys Met Glu Val Lys Ser Tyr Thr Lys Asn Asn Thr Ile Ala Pro Lys
385                    390                    395                    400
Lys Ala Ser His Arg Ile Leu Ser Asp Thr Ser Asp Glu Glu Asp Ala
                405                    410                    415
Ser Val Thr Val Gly Thr Gly Glu Lys Leu Arg Leu Ser Ala His Thr
            420                    425                    430
Ile Leu Pro Gly Ser Lys Thr Arg Glu Pro Ser Asn Ala Lys Gln Gln
        435                    440                    445
Lys Glu Lys Asn Lys Val Lys Lys Lys Arg Lys Lys Glu Thr Lys Gly
    450                    455                    460
Arg Glu Val Arg Phe Gly Lys Arg Ser Xaa Ser Ser Ala Pro Arg Ser
465                    470                    475                    480
Arg Arg Ala Ser Pro Gln Arg Val Gly Arg Met Thr Gly Thr Leu Trp
            485                    490                    495
Gly Ala Leu Ala Ala Ser Arg Gly Pro Arg Trp Cys
            500                    505
```

```
<210> 6151
<211> 648
<212> DNA
<213> Homo sapiens

<400> 6151
ttttttttt ttttttttga agggtgagaa atttattcag atttcttcat aattcccccc
60
aaaagctcca accacgttgc cagtccttgg gtgctgcagt tggtcgggga gaggggctgt
120
gtggaggtca ccttctggta gacggagacc cgcttttcag actctgtggc gcagcaggcg
180
ggccaggaac atttgggcca ctattgctct tagccctgcc gcgcctgact ttctctcctc
240
```

```
tactttcctt ccgaccgtag ggacaagtgt ggggatccgc tttgggctcc aaggccctgc
300
ccgcactggc agcaccaagc gggtgtagaa tgactggaag gagcagggaa ggaagatggg
360
tgtcaactgt cccggccagt ggctgcgtgc atgtgtgtgt gaacagggaa aaggccaccc
420
tctcccatgt ttctcccgtc tcctcggttc tcctcggaga cccgcagggc tgcccgaggt
480
agctccgagt tgccctgggt cgctgggggct tggtccgcat cctcctccgc tagtccgctc
540
ccgcgttcca cagcgccccg ccgctcggtg tgcacgcact gcggcttaac ccagccgaca
600
aggcacgctt gccaaagagg cgcgggtgtg tgtgtgcggg gtccgcgg
648
```

<210> 6152
<211> 130
<212> PRT
<213> Homo sapiens

```
<400> 6152
Met Arg Thr Lys Pro Gln Arg Pro Arg Ala Thr Arg Ser Tyr Leu Gly
1               5                   10                  15
Gln Pro Cys Gly Ser Pro Arg Arg Thr Glu Glu Thr Gly Glu Thr Trp
            20                  25                  30
Glu Arg Val Ala Phe Ser Leu Phe Thr His Thr Cys Thr Gln Pro Leu
        35                  40                  45
Ala Gly Thr Val Asp Thr His Leu Pro Ser Leu Leu Leu Pro Val Ile
        50                  55                  60
Leu His Pro Leu Gly Ala Ala Ser Ala Gly Arg Ala Leu Glu Pro Lys
65                  70                  75                  80
Ala Asp Pro His Thr Cys Pro Tyr Gly Arg Lys Glu Ser Arg Gly Glu
                85                  90                  95
Lys Val Arg Arg Gly Arg Ala Lys Ser Asn Ser Gly Pro Asn Val Pro
            100                 105                 110
Gly Pro Pro Ala Ala Pro Gln Ser Leu Lys Ser Gly Ser Pro Ser Thr
        115                 120                 125
Arg Arg
    130
```

<210> 6153
<211> 1810
<212> DNA
<213> Homo sapiens

```
<400> 6153
gatgcagtta cctgtgtgga cttcagtatc aacacaaagc agctggccag tggtnccatg
60
gactcatgcc tcatggtctg gcacatgaag ctgcagtcac gcgcctaccg cttcactggc
120
cacaaggatg ccgtcacctg tgtgaacttc tctccttcgg acacctgct tgcttccggc
180
tcccgagaca agactgtccg catctgggta cccaatgtca aaggtgagtc cactgtgttt
240
```

```
cgtgcacaca cagccacagt gaggagtgtc cacttctgca gtgatggcca gtccttcgtg
300
acagcctctg acgacaagac agtcaaagtg tgggcaactc atcgccagaa attcctgttc
360
tccctgagcc agcatatcaa ctgggtccgc tgtgccaagt tctcccccga cgggcggctc
420
atcgtgtctg ccagtgatga caagactgtt aagctgtggg acaagagcag ccgggaatgt
480
gtccactcgt attgtgagca tggcggcttt gtcacctatg tggacttcca ccccagtggg
540
acgtgcattg ccgctgccgg catggacaac acagtgaagg tgtgggacgt gcggactcac
600
cggctgctgc agcattatca gttgcacagt gcagcagtga acgggctctc tttccacccg
660
tcgggaaact acctgatcac agcctccagt gactcaaccc tgaagatcct ggacctgatg
720
gagggccggc tgctctacac actccacggg catcagggac cagccaccac tgttgccttt
780
tcaagaacgg gggagtattt tgcttctgga ggctctgatg aacaagtgat ggtttggaag
840
agtaactttg atattgttga tcatggagaa gtcacgaaag tgccgaggcc cccagccaca
900
ctggccagct ccatggggaa tctgccagaa gtggacttcc ctgtcccccc aggcagaggc
960
tggagtgtgg agtctgtgca gagccagccc caggagcccg tgagtgtgcc ccagacactg
1020
actagcacgc tggagcacat tgtgggccag ctggatgtcc tcactcagac agtctccatt
1080
ctggagcagc ggttgacact gacagaagac aagctgaagc agtgtctgga gaaccagcag
1140
ctaatcatgc agagagcaac accatgatca ggggagcagg aatcaggagc tcggtggatt
1200
tgcaggtggc aggccaggga tttgtaccat gggacttggg taaataaagg ggactgaact
1260
ctgtgggaat cacatccata ctggagccct ggattttgc agttctgccc tccaccttgc
1320
tatctgcacc aggaggctct ccacctggca gccagaggtc cccagtgggc cgggctcaca
1380
cacaaatgat gcttcagacc cgaatgagag gaccacattt tgcttaatgt aaaggagcca
1440
cttgaaaatg tctgctcctt cggggtcctg agattgtggc tccccctctg gaggaggtgg
1500
ctccacgatg ccttgatttt cactcatcat ttggacatgt gactggcttt tcctacctct
1560
gccatggtgt agaaattgat tgcacattga ttggatgagc cggggggtttt ctctaaatct
1620
gactaaaggc ccaaagtggg cccatctgag tcaggtttgt tgagaacaag ccctctcaag
1680
tgggtggtgg cttttcagtg gccctgattt ctgttccaca cgtgttcact ggagccaggt
1740
gacttcctcc ttgcgtgagt gagggcacag gaatctcaaa attaaacctg acttcattgc
1800
aaaaaaaaaa
1810
```

5336

```
<210> 6154
<211> 388
<212> PRT
<213> Homo sapiens

<400> 6154
Asp Ala Val Thr Cys Val Asp Phe Ser Ile Asn Thr Lys Gln Leu Ala
 1               5                  10                  15
Ser Gly Xaa Met Asp Ser Cys Leu Met Val Trp His Met Lys Leu Gln
            20                  25                  30
Ser Arg Ala Tyr Arg Phe Thr Gly His Lys Asp Ala Val Thr Cys Val
        35                  40                  45
Asn Phe Ser Pro Ser Gly His Leu Leu Ala Ser Gly Ser Arg Asp Lys
    50                  55                  60
Thr Val Arg Ile Trp Val Pro Asn Val Lys Gly Glu Ser Thr Val Phe
65                  70                  75                  80
Arg Ala His Thr Ala Thr Val Arg Ser Val His Phe Cys Ser Asp Gly
                85                  90                  95
Gln Ser Phe Val Thr Ala Ser Asp Asp Lys Thr Val Lys Val Trp Ala
            100                 105                 110
Thr His Arg Gln Lys Phe Leu Phe Ser Leu Ser Gln His Ile Asn Trp
        115                 120                 125
Val Arg Cys Ala Lys Phe Ser Pro Asp Gly Arg Leu Ile Val Ser Ala
    130                 135                 140
Ser Asp Asp Lys Thr Val Lys Leu Trp Asp Lys Ser Ser Arg Glu Cys
145                 150                 155                 160
Val His Ser Tyr Cys Glu His Gly Gly Phe Val Thr Tyr Val Asp Phe
                165                 170                 175
His Pro Ser Gly Thr Cys Ile Ala Ala Ala Gly Met Asp Asn Thr Val
            180                 185                 190
Lys Val Trp Asp Val Arg Thr His Arg Leu Leu Gln His Tyr Gln Leu
        195                 200                 205
His Ser Ala Ala Val Asn Gly Leu Ser Phe His Pro Ser Gly Asn Tyr
    210                 215                 220
Leu Ile Thr Ala Ser Ser Asp Ser Thr Leu Lys Ile Leu Asp Leu Met
225                 230                 235                 240
Glu Gly Arg Leu Leu Tyr Thr Leu His Gly His Gln Gly Pro Ala Thr
                245                 250                 255
Thr Val Ala Phe Ser Arg Thr Gly Glu Tyr Phe Ala Ser Gly Gly Ser
            260                 265                 270
Asp Glu Gln Val Met Val Trp Lys Ser Asn Phe Asp Ile Val Asp His
        275                 280                 285
Gly Glu Val Thr Lys Val Pro Arg Pro Ala Thr Leu Ala Ser Ser
    290                 295                 300
Met Gly Asn Leu Pro Glu Val Asp Phe Pro Val Pro Pro Gly Arg Gly
305                 310                 315                 320
Trp Ser Val Glu Ser Val Gln Ser Gln Pro Gln Glu Pro Val Ser Val
                325                 330                 335
Pro Gln Thr Leu Thr Ser Thr Leu Glu His Ile Val Gly Gln Leu Asp
            340                 345                 350
Val Leu Thr Gln Thr Val Ser Ile Leu Glu Gln Arg Leu Thr Leu Thr
        355                 360                 365
Glu Asp Lys Leu Lys Gln Cys Leu Glu Asn Gln Gln Leu Ile Met Gln
```

```
          370              375               380
Arg Ala Thr Pro
385


<210> 6155
<211> 995
<212> DNA
<213> Homo sapiens


<400> 6155
aacagccaca gacgtatgtg taatatgatg ggctttagaa tgtacctgca aagcagtttt
60
tttttttttt ccatttggag gaaaaaagat gaaccaaaaa agactgaatt gggatgctaa
120
aataacagcg atttattatt aaggaaatga tacgcttttg tcccattcaa ataatgtttt
180
tattcccctt ttctttattc ttgggaggtt cctattgttg tgccaggtcg ttttcactga
240
acgattttta aaggtattca ccagtcccac gtgtgaccgg ttgcattttt actgtgcagg
300
accatcgtga agcctgtggc caaagagttt gatccagaca tggtcttagt atctgctgga
360
tttgatgcat tggaaggcca cacccctcct ctaggagggt acaaagtgac ggcaaaatgt
420
tttggtcatt tgacgaagca attgatgaca ttggctgatg gacgtgtggt gttggctcta
480
gaaggaggac atgatctcac agccatctgt gatgcatcag aagcctgtgt aaatgccctt
540
ctaggaaatg agctggagcc acttgcagaa gatattctcc accaaagccc gaatatgaat
600
gctgttattt ctttacagaa gatcattgaa attcaaaaac tgctggtgag cctatggaag
660
aggagccagc cttgtgaagt gccaagtccc cctctgatat ttcctgtgtg tgacatcatt
720
gtgtatcccc ccaccccagt accctcagac atgtcttgtc tgctgcctgg gtggcacaga
780
ttcaatggaa cataaacact gggcacaaaa ttctgaacag cagcttcact tgttctttgg
840
atggacttga aagggcatta aagattcctt aaacgtaacc gctgtgattc tagagttaca
900
gtaaaccacg attggaagaa actgcttcca gcatgctttt aatatgctgg gtgacccact
960
cctagacacc aagtttgaac tagaaacatt cagta
995


<210> 6156
<211> 164
<212> PRT
<213> Homo sapiens


<400> 6156
Thr Ile Val Lys Pro Val Ala Lys Glu Phe Asp Pro Asp Met Val Leu
 1               5                 10                15
Val Ser Ala Gly Phe Asp Ala Leu Glu Gly His Thr Pro Pro Leu Gly
```

5338

```
              20                  25                  30
Gly Tyr Lys Val Thr Ala Lys Cys Phe Gly His Leu Thr Lys Gln Leu
          35                  40                  45
Met Thr Leu Ala Asp Gly Arg Val Val Leu Ala Leu Glu Gly Gly His
      50                  55                  60
Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Asn Ala Leu
65                  70                  75                  80
Leu Gly Asn Glu Leu Glu Pro Leu Ala Glu Asp Ile Leu His Gln Ser
                  85                  90                  95
Pro Asn Met Asn Ala Val Ile Ser Leu Gln Lys Ile Ile Glu Ile Gln
              100                 105                 110
Lys Leu Leu Val Ser Leu Trp Lys Arg Ser Gln Pro Cys Glu Val Pro
          115                 120                 125
Ser Pro Pro Leu Ile Phe Pro Val Cys Asp Ile Ile Val Tyr Pro Pro
      130                 135                 140
Thr Pro Val Pro Ser Asp Met Ser Cys Leu Leu Pro Gly Trp His Arg
145                 150                 155                 160
Phe Asn Gly Thr
```

<210> 6157
<211> 2135
<212> DNA
<213> Homo sapiens

<400> 6157
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natttcattt tatcccaact acttttgagg taggtattat cctgttttac aaacgaagaa
60
actaaggctc agtgagatta atgatccaag gtcatataat ctaagtggta gagctgggat
120
ttgaacttca gtttgactaa ctatgaaact tttaactgct attctttctc aactttcctt
180
ttttctgcag gatctggcga catggccaga aaggctctca agcttgcttc gtggaccagc
240
atggctcttg ctgcctctgg catctacttc tacagtaaca agtacttgga ccctaatgac
300
tttggcgctg tcagggtggg cagagcagtt gctacgacgg ctgtcatcag ttacgactac
360
ctcacttccc tgaagagtgt cccttatggc tcagaggagt acttgcagct gagatctaag
420
atccatgatt tgttccagag cttcgatgac acccctctgg ggacggcctc cctggcccag
480
gtccacaagg cagtgctgca tgatgggcgg acggtggccg tgaaggtcca gcacccaaag
540
gtgcgggctc agagctcgaa ggacattctc ctgatggagg tgctcgttct ggctgtgaag
600
cagctgttcc cagagtttga gtttatgtgg cttgtggatg aagccaagaa gaacctgcct
660
ttggagctgg atttcctcaa tgaagggagg aatgctgaga aggtgtccca gatgctcagg
720
cattttgact tcttgaaggt cccccgaatc cactgggacc tgtccacgga gcgggtcctc
780
ctgatggagt ttgtggatgg cgggcaggtc aatgacagag actacatgga gaggaacaag
840
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```
atcgacgtca atgagatctc acgccacctg ggcaagatgt atagtgagat gatcttcgtc
900
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960
acgggaaagg cggagattgt cctgttggac catgggcttt accagatgct cacggaagaa
1020
ttccgcctga attactgcca ccctctggcag tctctgatct ggactgacat gaagagagtg
1080
aaggagtaca gccagcgact gggagccggg gatctctacc ccttgtttgc ctgcatgctg
1140
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1200
gaggacttag agattcgcaa caacgcggcc aactacctcc cccagatcag ccatctcctc
1260
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1320
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1380
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1440
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1500
gtgaaggggt tgaagctggc tgaccgggtc ttggccctaa tatgctggct gttccctgct
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1680
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1800
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1860
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1920
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1980
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2040
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2100
tgtgtttcaa taaaaactcc ttcaaggttg aaaaa
2135


<210> 6158
<211> 455
<212> PRT
<213> Homo sapiens


<400> 6158
Met Ala Arg Lys Ala Leu Lys Leu Ala Ser Trp Thr Ser Met Ala Leu
1               5                   10                  15
Ala Ala Ser Gly Ile Tyr Phe Tyr Ser Asn Lys Tyr Leu Asp Pro Asn
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5340

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                    20                    25                    30
Asp Phe Gly Ala Val Arg Val Gly Arg Ala Val Ala Thr Thr Ala Val
            35                    40                    45
Ile Ser Tyr Asp Tyr Leu Thr Ser Leu Lys Ser Val Pro Tyr Gly Ser
        50                    55                    60
Glu Glu Tyr Leu Gln Leu Arg Ser Lys Ile His Asp Leu Phe Gln Ser
65                    70                    75                    80
Phe Asp Asp Thr Pro Leu Gly Thr Ala Ser Leu Ala Gln Val His Lys
                85                    90                    95
Ala Val Leu His Asp Gly Arg Thr Val Ala Val Lys Val Gln His Pro
            100                   105                   110
Lys Val Arg Ala Gln Ser Ser Lys Asp Ile Leu Leu Met Glu Val Leu
        115                   120                   125
Val Leu Ala Val Lys Gln Leu Phe Pro Glu Phe Glu Phe Met Trp Leu
    130                   135                   140
Val Asp Glu Ala Lys Lys Asn Leu Pro Leu Glu Leu Asp Phe Leu Asn
145                   150                   155                   160
Glu Gly Arg Asn Ala Glu Lys Val Ser Gln Met Leu Arg His Phe Asp
            165                   170                   175
Phe Leu Lys Val Pro Arg Ile His Trp Asp Leu Ser Thr Glu Arg Val
        180                   185                   190
Leu Leu Met Glu Phe Val Asp Gly Gly Gln Val Asn Asp Arg Asp Tyr
        195                   200                   205
Met Glu Arg Asn Lys Ile Asp Val Asn Glu Ile Ser Arg His Leu Gly
    210                   215                   220
Lys Met Tyr Ser Glu Met Ile Phe Val Asn Gly Phe Val His Cys Asp
225                   230                   235                   240
Pro His Pro Gly Asn Val Leu Val Arg Lys His Pro Gly Thr Gly Lys
            245                   250                   255
Ala Glu Ile Val Leu Leu Asp His Gly Leu Tyr Gln Met Leu Thr Glu
        260                   265                   270
Glu Phe Arg Leu Asn Tyr Cys His Leu Trp Gln Ser Leu Ile Trp Thr
        275                   280                   285
Asp Met Lys Arg Val Lys Glu Tyr Ser Gln Arg Leu Gly Ala Gly Asp
    290                   295                   300
Leu Tyr Pro Leu Phe Ala Cys Met Leu Thr Ala Arg Ser Trp Asp Ser
305                   310                   315                   320
Val Asn Arg Gly Ile Ser Gln Ala Pro Val Thr Ala Thr Glu Asp Leu
            325                   330                   335
Glu Ile Arg Asn Asn Ala Ala Asn Tyr Leu Pro Gln Ile Ser His Leu
        340                   345                   350
Leu Asn His Val Pro Arg Gln Met Leu Leu Ile Leu Lys Thr Asn Asp
        355                   360                   365
Leu Leu Arg Gly Ile Glu Ala Ala Leu Gly Thr Arg Ala Ser Ala Ser
    370                   375                   380
Ser Phe Leu Asn Met Ser Arg Cys Cys Ile Arg Ala Leu Ala Glu His
385                   390                   395                   400
Lys Lys Lys Asn Thr Cys Ser Phe Phe Arg Arg Thr Gln Ile Ser Phe
            405                   410                   415
Ser Glu Ala Phe Asn Leu Trp Gln Ile Asn Leu His Glu Leu Ile Leu
        420                   425                   430
Arg Val Lys Gly Leu Lys Leu Ala Asp Arg Val Leu Ala Leu Ile Cys
    435                   440                   445
Trp Leu Phe Pro Ala Pro Leu
```

5341

                450   455

<210> 6159
<211> 4310
<212> DNA
<213> Homo sapiens

<400> 6159
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120
ttcatcatca ccctgggctg caacagcgtc ctcatccagt tcgccacacc caacgatttc
180
tgttccttct acaacatcct gaaaacctgc cggggccaca ccctggagcg gtctgtgttc
240
agcgagcgga cggaggagtc ttctgccgtg cagtacttcc agttttatgg ctacctgtcc
300
cagcagcaga acatgatgca ggactacgtg cggacaggca cctaccagcg cgccatcctg
360
caaaaccaca ccgacttcaa ggacaagatc gttcttgatg ttggctgtgg ctctgggatc
420
ctgtcgtttt ttgccgccca agctggagca cggaaaatct acgcggtgga ggccagcacc
480
atggcccagc acgctgaggt cttggtgaag agtaacaacc tgacggaccg catcgtggtc
540
atcccgggca aggtggagga ggtgtcactc cccgagcagg tggacatcat catctcggag
600
cccatgggct acatgctctt caacgagcgc atgctggaga gctacctcca cgccaagaag
660
tacctgaagc ccagcggaaa catgtttcct accattggtg acgtccacct tgcacccttc
720
acggatgaac agctctacat ggagcagttc accaaggcca acttctggta ccagccatct
780
ttccatggag tggacctgtc ggccctccga ggtgccgcgg tggatgagta tttccggcag
840
cctgtggtgg acacatttga catccggatc ctgatggcca agtctgtcaa gtacacggtg
900
aacttcttag aagccaaaga aggagatttg cacaggatag aaatcccatt caaattccac
960
atgctgcatt cagggctggt ccacggcctg gctttctggt ttgacgttgc tttcatcggc
1020
tccataatga ccgtgtggct gtccacagcc ccgacagagc ccctgaccca ctggtaccag
1080
gtgcggtgcc tgttccagtc accactgttc gccaaggcag gggacacgct ctcagggaca
1140
tgtctgctta ttgccaacaa aagacagagc tacgacatca gtattgtggc ccaggtggac
1200
cagaccggct ccaagtccag taacctcctg gatctgaaaa accccttctt tagatacacg
1260
ggcacaacgc cctcaccccc acccggctcc cactacacat ctccctcgga aaacatgtgg
1320
aacacgggca gcacctacaa cctcagcagc gggatggccg tggcagggat gccgaccgcc
1380

                            5342

```
tatgacttga gcagtgttat tgccagtggc tccagcgtgg gccacaacaa cctgattcct
1440
ttagccaaca cggggattgt caatcacacc cactcccgga tgggctccat aatgagcacg
1500
gggattgtcc aagggtcctc cggcgcccag ggcagtggtg gtggcagcac gagtgcccac
1560
tatgcagtca acagccagtt caccatgggc ggccccgcca tctccatggc gtcgcccatg
1620
tccatcccga ccaacaccat gcactacggg agctaggggc ccgccccgcg gactgacagc
1680
accaggaaac caaatgatgt ccctgcccgc cgcccccgcc gggcggcttt cccccttgta
1740
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1800
tacacgatgt tgccgccgtc cccaccctaa cccccacctc ccggccctga gcgtgtgtcg
1860
ctgccatatt ttacacaaaa tcatgttgtg ggagccctcg tcccccctcc tgcccgctct
1920
accctgacct gggcttgtca tctgctggaa caggcgccat ggggcctgcc agccctgcct
1980
gccaggtccc ttagcacctg tcccccctgcc tgtctccagt gggaaggtag cctggccagg
2040
cggggcctcc ccttcgacga ccaggcctcg gtcacaacgg acgtgacatg ctgctttttt
2100
taattttatt tttttatgaa aagaaccagt gtcaatccgc agaccctctg tgaagccagg
2160
ccggccgggc cgagccagca gcccctctcc ctagactcag aggcgccgcg gggaggggtg
2220
gccccgccga ggcttcaggg gccccctccc caccaaaggg ttcacctcac acttgaatgt
2280
acaacccacc ccactgtcgg gaaggcctcc gtcctcggcc cctgcctctt gctgctgtcc
2340
tgtccccgag cccctgcagg tccccccccg ccccccact caagagttag agcaggtggc
2400
tgcaggcctt gggcccggag ggaaggccac tgccggccac ttggggcaga cacagacacc
2460
tcaaggatct gtcacggaag gcgtcctttt tccttgtagc taacgttagg cctgagtagc
2520
tcccctccat ccttgtagac gctccagtcc ctactactgt gacggcattt ccatccctcc
2580
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2640
aaagaaaaaa taaatgagga aacgtgttgc agcacaggca gttttcttct ccttctgctc
2700
ccctgtttct cataccccca aactcagatg ctggagctca ggcccgccgt gtgtgcaccc
2760
aggcaggagc gggcgctgtc caggctgggc cgcccccttg gctctccctc ctgttccagg
2820
ggagccatag gagggaaagc aggtggcccg gggggggatat ggggggcccca gccctgtccc
2880
aaagctccct gctcggctgc ccctcgcccg cctttatata aattctctga atcacctttg
2940
catagaaaat aaaagtgttt gctttgtaag aaaagtctgg aaagtagcag aatcatctca
3000
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5343

aggtgtcaaa ggagccttca gtcatcgtct ggggggcagg acaggcagag gggttggtcc
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acttaggtgt tgcctgaaag aaagaattgt ctgtgggacc cgggccttcc taggaggggg
3120
ccagggactg cggcaaggta ggggacagcg cgatgtttga gggcagagat gtgatttggg
3180
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3240
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3300
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3360
gcgccccaaa gagccactgc agccaaggca cagggatgag ccacaggacc accatgggga
3420
tgaagacaaa gagggagtag ccgtagatgc acacagtctc caggaaggtg tagggcccca
3480
tgcgctcctg gacacccttg cgccaccgca ggaagcccca cagggccagg ggcaccagcc
3540
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3660
caaaggccaa cgtggcacag atccagaagg ggccatacag atccggccga ttccgcagat
3720
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3780
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3840
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3900
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3960
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4020
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4080
gcatccctcg ctggcgacca actgcaccca cggaggcttg aactcgtcgt cccgtcccca
4140
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4200
cctgtgcctt ggctgcagtg gctctttggg gcgctggccc tgggcctgtc agccgccggg
4260
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4310

<210> 6160
<211> 551
<212> PRT
<213> Homo sapiens

<400> 6160
Leu Glu Val Arg Ala Gly Pro Asp Ser Ala Gly Ile Ala Leu Tyr Ser
 1   5   10   15
His Glu Asp Val Cys Val Phe Lys Cys Ser Val Ser Arg Glu Thr Glu

```
                 20                      25                      30
    Cys Ser Arg Val Gly Lys Gln Ser Phe Ile Ile Thr Leu Gly Cys Asn
             35                      40                      45
    Ser Val Leu Ile Gln Phe Ala Thr Pro Asn Asp Phe Cys Ser Phe Tyr
             50                      55                      60
    Asn Ile Leu Lys Thr Cys Arg Gly His Thr Leu Glu Arg Ser Val Phe
    65                      70                      75                      80
    Ser Glu Arg Thr Glu Glu Ser Ser Ala Val Gln Tyr Phe Gln Phe Tyr
                     85                      90                      95
    Gly Tyr Leu Ser Gln Gln Gln Asn Met Met Gln Asp Tyr Val Arg Thr
                 100                     105                     110
    Gly Thr Tyr Gln Arg Ala Ile Leu Gln Asn His Thr Asp Phe Lys Asp
                 115                     120                     125
    Lys Ile Val Leu Asp Val Gly Cys Gly Ser Gly Ile Leu Ser Phe Phe
                 130                     135                     140
    Ala Ala Gln Ala Gly Ala Arg Lys Ile Tyr Ala Val Glu Ala Ser Thr
    145                     150                     155                     160
    Met Ala Gln His Ala Glu Val Leu Val Lys Ser Asn Asn Leu Thr Asp
                     165                     170                     175
    Arg Ile Val Val Ile Pro Gly Lys Val Glu Glu Val Ser Leu Pro Glu
                 180                     185                     190
    Gln Val Asp Ile Ile Ile Ser Glu Pro Met Gly Tyr Met Leu Phe Asn
                 195                     200                     205
    Glu Arg Met Leu Glu Ser Tyr Leu His Ala Lys Lys Tyr Leu Lys Pro
             210                     215                     220
    Ser Gly Asn Met Phe Pro Thr Ile Gly Asp Val His Leu Ala Pro Phe
    225                     230                     235                     240
    Thr Asp Glu Gln Leu Tyr Met Glu Gln Phe Thr Lys Ala Asn Phe Trp
                     245                     250                     255
    Tyr Gln Pro Ser Phe His Gly Val Asp Leu Ser Ala Leu Arg Gly Ala
                 260                     265                     270
    Ala Val Asp Glu Tyr Phe Arg Gln Pro Val Val Asp Thr Phe Asp Ile
                 275                     280                     285
    Arg Ile Leu Met Ala Lys Ser Val Lys Tyr Thr Val Asn Phe Leu Glu
             290                     295                     300
    Ala Lys Glu Gly Asp Leu His Arg Ile Glu Ile Pro Phe Lys Phe His
    305                     310                     315                     320
    Met Leu His Ser Gly Leu Val His Gly Leu Ala Phe Trp Phe Asp Val
                   · 325                     330                     335
    Ala Phe Ile Gly Ser Ile Met Thr Val Trp Leu Ser Thr Ala Pro Thr
                 340                     345                     350
    Glu Pro Leu Thr His Trp Tyr Gln Val Arg Cys Leu Phe Gln Ser Pro
             355                     360                     365
    Leu Phe Ala Lys Ala Gly Asp Thr Leu Ser Gly Thr Cys Leu Leu Ile
             370                     375                     380
    Ala Asn Lys Arg Gln Ser Tyr Asp Ile Ser Ile Val Ala Gln Val Asp
    385                     390                     395                     400
    Gln Thr Gly Ser Lys Ser Ser Asn Leu Leu Asp Leu Lys Asn Pro Phe
                 405                     410                     415
    Phe Arg Tyr Thr Gly Thr Thr Pro Ser Pro Pro Gly Ser His Tyr
                 420                     425                     430
    Thr Ser Pro Ser Glu Asn Met Trp Asn Thr Gly Ser Thr Tyr Asn Leu
             435                     440                     445
    Ser Ser Gly Met Ala Val Ala Gly Met Pro Thr Ala Tyr Asp Leu Ser
```

5345

```
        450                 455                 460
Ser Val Ile Ala Ser Gly Ser Ser Val Gly His Asn Asn Leu Ile Pro
465                 470                 475                 480
Leu Ala Asn Thr Gly Ile Val Asn His Thr His Ser Arg Met Gly Ser
                485                 490                 495
Ile Met Ser Thr Gly Ile Val Gln Gly Ser Ser Gly Ala Gln Gly Ser
            500                 505                 510
Gly Gly Gly Ser Thr Ser Ala His Tyr Ala Val Asn Ser Gln Phe Thr
        515                 520                 525
Met Gly Gly Pro Ala Ile Ser Met Ala Ser Pro Met Ser Ile Pro Thr
    530                 535                 540
Asn Thr Met His Tyr Gly Ser
545                 550
```

```
<210> 6161
<211> 1489
<212> DNA
<213> Homo sapiens

<400> 6161
ggctgcatga tcttcagcag attcagtaca gagggaagtg agctgtggga gaggaaggag
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gatgggggaa atggcaagaa aaggagcacc ctgcttagaa agggaacgga gccgggtgtg
120
gtggctcacg cctgcaatcc anacaccttg ggaggccgaa gcaaggagat cacctgagcc
180
caagagtttg agaccaccca catagcaaga ccccatctct attttttgga aaaaaaaaa
240
aaaagcagca accagcagga tgggtggaaa aaagttgctg aaggctcttc aagatcctct
300
ctgcctgctc cttctctcac agagggacag gggagggtga tgagtcagtg gactgaatgt
360
ccccatgggg atgaaggatg gttggggtca gggtcctaga gggagggctg gaaggaggga
420
aggagatggc cagagaagga tgtaggacac agaggtgccg ccgtggatca ccaagaggtt
480
caggactggc cagaggaagg agaggagatc aaggcaagca tgaggcactt gggagatgca
540
tctgtgcctg cacacagctg aaatccccag gaaataagac gggagcaggg tgggtttctg
600
cagccgaggt gagaccaaag tgccagctca ctgccaccct cagtaaagac taacttgccc
660
ttccccacaa ctccctccc agaagtagct tgctctcctc tgcctgccac acatcggggg
720
gctcagggaa agctcccct ccctggacag ctagtgttcc ctaggccaag gccagtccct
780
gcagagatga ggagctggga aatcccctcc tcccatcccg cacgtccacg cgtgccagat
840
cctgtgctgc gggcttttca cacacagcct cttagacgct tagcctgtga ggcgggtgct
900
gttgtccttc cttcccattt tgcaactgag caaacagcct gaaagagaca aaaaccaggt
960
agttagcatg accccaaagc cactccctgg tctacgctgt tctgcagcct gagcctgggg
1020
```

5346

```
tggccaggtg gggttgtgca gtgagggggg gaaggagaat agcccccaaa aatgctgccg
1080
gaatggtaaa gggcctggac tgcaaagcta gtgacttgag ctttattttg tggcactgga
1140
ggttttccca gtcattgtaa tgatacaatc agatttgcgt tgtcttcaag ttaccatggt
1200
aaccgtactt ccacccacca agagtggatt ggagaaggca aaactagggc agagaagcca
1260
gggagtgttg agaaggtctg aacccagaca gtgggcagct gggcccccaag acggatgggg
1320
gactccagaa gcgtggagct ggcagagaga aacctgcccg gggcatcaga gaaaagggcg
1380
actgtgcagg aacagagtag atgaggtggg gaacctttgg gtaagaagag ctgaatcagg
1440
agcattgagg cagcggtttt caaacctcag aagcaacagc agggccggc
1489


<210> 6162
<211> 58
<212> PRT
<213> Homo sapiens

<400> 6162
Gly Cys Met Ile Phe Ser Arg Phe Ser Thr Glu Gly Ser Glu Leu Trp
1               5                   10                  15
Glu Arg Lys Glu Asp Gly Gly Asn Gly Lys Lys Arg Ser Thr Leu Leu
            20                  25                  30
Arg Lys Gly Thr Glu Pro Gly Val Val Ala His Ala Cys Asn Pro Xaa
        35                  40                  45
Thr Leu Gly Gly Arg Ser Lys Glu Ile Thr
    50                  55


<210> 6163
<211> 713
<212> DNA
<213> Homo sapiens

<400> 6163
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60
gagatgagtc cagctgcggt cagagccatg ggatgtgggt cactgtgacc cagtgggtca
120
caggtgctga gcaaggaagg gctgggaggc tcaagcaaaa tctacaagaa aaatctaaag
180
gggcccagcc tctgccagga aaagcaggcc tggctctgct gaaaccccaa tcacgctctg
240
atggataccg gtacctgggc aaggataccg tggatggact tgattcttct ctcctgaaat
300
gtacgagaag gtgcatgcgg ggatttcggc tgcctgaaaa gcaaccctct aaaacccgag
360
tgtcattttt agaatcaaaa aggaaggaag gcagtggctg gctgcactgg tcagtaacga
420
gatctggagc ttttcgcctt aaggtcactg tttaaaactc tgccctgggt cagttgtaac
480
```

5347

```
agaaagtcac aactccctca caggcatcag ggtgcaactt tgaatgccaa gaggggctgt
540
gtctgttggt taccacgcgg cgagctcccg'ggacacctcc tgacacctcc tgacagtgtc
600
tctttctcta ggagtctcct ctcttcccac ccaccatggc ggcctggcct ggaggggagg
660
cattggggac tgagtccttc cccgacaggg agtctctctc ccccctggcg cgc
713
```

<210> 6164
<211> 120
<212> PRT
<213> Homo sapiens

<400> 6164
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Met Trp Val Thr Val Thr Gln Trp Val Thr Gly Ala Glu Gln Gly Arg
 1               5                  10                  15
Ala Gly Arg Leu Lys Gln Asn Leu Gln Glu Lys Ser Lys Gly Ala Gln
            20                  25                  30
Pro Leu Pro Gly Lys Ala Gly Leu Ala Leu Leu Lys Pro Gln Ser Arg
        35                  40                  45
Ser Asp Gly Tyr Arg Tyr Leu Gly Lys Asp Thr Val Asp Gly Leu Asp
    50                  55                  60
Ser Ser Leu Leu Lys Cys Thr Arg Arg Cys Met Arg Gly Phe Arg Leu
65                  70                  75                  80
Pro Glu Lys Gln Pro Ser Lys Thr Arg Val Ser Phe Leu Glu Ser Lys
                85                  90                  95
Arg Lys Glu Gly Ser Gly Trp Leu His Trp Ser Val Thr Arg Ser Gly
            100                 105                 110
Ala Phe Arg Leu Lys Val Thr Val
        115                 120
```

<210> 6165
<211> 1004
<212> DNA
<213> Homo sapiens

<400> 6165
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cccagccgga tcgggcggcg aaggccggcg cggcgagcag caaccatgtc ggtgttcggg
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aagctgttcg gggctggagg gggtaaggcc ggcaagggcg gcccgacccc ccaggaggcc
120
atccagcggc tgcgggacac ggaagagatg ttaagcaaga aacaggagtt cctggagaag
180
aaaatcgagc aggagctgac ggccgccaag aagcacggca ccaaaaacaa gcgcgcggcc
240
ctccaggcac tgaagcgtaa gaagaggtat gagaagcagc tggcgcagat cgacggcaca
300
ttatcaacca tcgagttcca gcgggaggcc ctggagaatg ccaacaccaa caccgaggtg
360
ctcaagaaca tgggctatgc cgccaaggcc atgaaggcgg cccatgacaa catggacatc
420
gataaagttg atgagttaat gcaggacatt gctgaccagc aagaacttgc agaggagatt
480
```

```
tcaacagcaa tttcgaaacc tgtagggttt ggagaagagt ttgacgagga tgagctcatg
540
gcggaattag aagaactaga acaggaggaa ctagacaaga atttgctgga aatcagtgga
600
cccgaaacag tccctctacc aaatgttccc tctatagccc taccatcaaa acccgccaag
660
aagaaagaag aggaggacga cgacatgaag gaattggaga actgggctgg atccatgtaa
720
tggggtccag cgctggctgg gcccagacag actgtggtgg cctgcgcagc gagcaggcgt
780
gtgcgtgtgt ggggcaggca ggatgtggtg caggcaggtt ccatcgcttt cgactctcac
840
tccaaagcag tagggccgcg ttgctgctca ctctctgcat agcatggtct gcacctggga
900
gttggccggg gggaggggg cgagcgggct ggcacgtgcc tgctgtttat aatgttgaat
960
ttctgtaaaa taaactgtat ttgcaaatcc aaaaaaaaaa aaaa
1004
```

<210> 6166
<211> 239
<212> PRT
<213> Homo sapiens

<400> 6166
```
Pro Ser Arg Ile Gly Arg Arg Arg Pro Ala Arg Arg Ala Ala Thr Met
1               5                   10                  15
Ser Val Phe Gly Lys Leu Phe Gly Ala Gly Gly Gly Lys Ala Gly Lys
            20                  25                  30
Gly Gly Pro Thr Pro Gln Glu Ala Ile Gln Arg Leu Arg Asp Thr Glu
            35                  40                  45
Glu Met Leu Ser Lys Lys Gln Glu Phe Leu Glu Lys Lys Ile Glu Gln
        50                  55                  60
Glu Leu Thr Ala Ala Lys Lys His Gly Thr Lys Asn Lys Arg Ala Ala
65                  70                  75                  80
Leu Gln Ala Leu Lys Arg Lys Arg Tyr Glu Lys Gln Leu Ala Gln
                85                  90                  95
Ile Asp Gly Thr Leu Ser Thr Ile Glu Phe Gln Arg Glu Ala Leu Glu
            100                 105                 110
Asn Ala Asn Thr Asn Thr Glu Val Leu Lys Asn Met Gly Tyr Ala Ala
            115                 120                 125
Lys Ala Met Lys Ala Ala His Asp Asn Met Asp Ile Asp Lys Val Asp
        130                 135                 140
Glu Leu Met Gln Asp Ile Ala Asp Gln Gln Glu Leu Ala Glu Glu Ile
145                 150                 155                 160
Ser Thr Ala Ile Ser Lys Pro Val Gly Phe Gly Glu Glu Phe Asp Glu
                165                 170                 175
Asp Glu Leu Met Ala Glu Leu Glu Glu Leu Glu Gln Glu Glu Leu Asp
            180                 185                 190
Lys Asn Leu Leu Glu Ile Ser Gly Pro Glu Thr Val Pro Leu Pro Asn
        195                 200                 205
Val Pro Ser Ile Ala Leu Pro Ser Lys Pro Ala Lys Lys Lys Glu Glu
    210                 215                 220
Glu Asp Asp Asp Met Lys Glu Leu Glu Asn Trp Ala Gly Ser Met
```

5349

225   230   235

<210> 6167
<211> 1220
<212> DNA
<213> Homo sapiens

<400> 6167
ngccatacag cattttagtt ttgttctttc cattaactga agtcacgagg tatgcctcct
60
tggaaactcc aacagttaag agattctcat gtattccatg aaataaaaag caaagaaaaa
120
tcaaacttgt cttaatgaga tggaagtgtt ggatcaaaca ctgattgagc tgttctatgt
180
cctccacttc cccagtgcct tctctcctcc cgggtctgcg cggacgcggc ctccttacct
240
catttgtcct cgcccctccc cgtccctcta cgcgttttgg tccctgtttg gtgctttctg
300
tttgcagcta cggcagtgag tatgtatgtg acggaccccg agtcacccgc ggcctgggac
360
ccctgcctac cctccgtctc gccagccgag ctgtggaact agcgcgtgcc ccctcgccga
420
cctcggcgtc tccggtccgc ccctcacttg tggtggggcg cagctcctgg tccctcagct
480
gcgcgccgcc ccacgcggcc gggctgcggg tctagggggt ccgcatctcc ctggctttcc
540
aagggctaag gtcgtgattc tagggcggct gggcgtccag ggcctcggtg ggggtggcgt
600
gtctgccctt tttatctccc cgcaaggccc ccagtcttct agggaagcca gtcagtgaag
660
cgcggaggtc cgggcgcgcc gagagagagt ccagtctttg aggaccgagt agtcctgggc
720
cacctcccgc ctctgctgtc agaagcagca gctgccgccg tggaatccaa aatttcggga
780
gctgtgaccc tttcctcatg taaaacgagt agtcttggac gatctgggca taggaaccaa
840
tcagaaacaa tcgcttcagc aatcaagacc attgttcatc atggaggaac ccatggatac
900
ctctgagcct ctatctgcat taccattcac tgggcagcag tcttttgagc caagtggcaa
960
atttggacag tatccatcga tgcagatgaa ccacatccag gcactgggga agtggaggac
1020
atagaacagc tcaatcagtg tttgatccaa cacttccatc tcattaagac aagtttgatt
1080
tttctttgct ttttatttca tggaatacat gagaatctct taactgttgg agtttccaag
1140
gaggcatacc tcatgacttc agttaatgga aagaacaaaa ctaaaatgct gtatggccaa
1200
agccacaaag ggaaggatcc
1220

<210> 6168
<211> 90
<212> PRT

5350

<213> Homo sapiens

<400> 6168
Ala Lys Trp Gln Ile Trp Thr Val Ser Ile Asp Ala Asp Glu Pro His
1   5   10   15
Pro Gly Thr Gly Glu Val Glu Asp Ile Glu Gln Leu Asn Gln Cys Leu
            20   25   30
Ile Gln His Phe His Leu Ile Lys Thr Ser Leu Ile Phe Leu Cys Phe
        35   40   45
Leu Phe His Gly Ile His Glu Asn Leu Leu Thr Val Gly Val Ser Lys
    50   55   60
Glu Ala Tyr Leu Met Thr Ser Val Asn Gly Lys Asn Lys Thr Lys Met
65   70   75   80
Leu Tyr Gly Gln Ser His Lys Gly Lys Asp
                85   90

<210> 6169
<211> 720
<212> DNA
<213> Homo sapiens

<400> 6169
tgagggcttc gatcccttct ctgatttgct gtcagccatg aacggatgga tgtgatgcct
60
gctagccaaa aggcttccct ctgtgtgttg cagtcctgtg gcattatgca tgccccctcc
120
cagtgacccc aggcttttta tggctgtgaa acacgttaaa atttcagggg aagacgtgac
180
cttttgaggt gactataact gaagattgct ttacagaagc ccaaaaaggt tttttgagtc
240
atgatgcaag aatctgggac tgagacaaaa agtaacggtt cagccatcca gaatgggtcg
300
ggcggcagca accacttact agagtgcggc ggtcttcggg aggggcggtc caacggagag
360
acgccggccg tggacatcgg ggcagctgac ctcgcccacg cccagcagca gcagcaacag
420
tggcatctca taaaccatca gccctctagg agtcccagca gttggcttaa gagactaatt
480
tcaagccctt gggagttgga agtcctgcag gtcccttgtg gggagcagtt gctgagacga
540
agatgagtgg acctgtgtgt cagcctaacc cttccccatt ttgaataaaa ttattctttg
600
gagaaatggt tcccactgct ttcatgcaaa aataaaaatt aaacgaaaaa cagcttaagc
660
ctgtgaagaa ggaaatactg agctagccag caaaagagag aaagaagagg aggggagagg
720

<210> 6170
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6170
Met Met Gln Glu Ser Gly Thr Glu Thr Lys Ser Asn Gly Ser Ala Ile

5351

```
 1               5                    10                  15
Gln Asn Gly Ser Gly Gly Ser Asn His Leu Leu Glu Cys Gly Gly Leu
            20                  25                  30
Arg Glu Gly Arg Ser Asn Gly Glu Thr Pro Ala Val Asp Ile Gly Ala
        35                  40                  45
Ala Asp Leu Ala His Ala Gln Gln Gln Gln Gln Trp His Leu Ile
    50                  55                  60
Asn His Gln Pro Ser Arg Ser Pro Ser Ser Trp Leu Lys Arg Leu Ile
65                  70                  75                  80
Ser Ser Pro Trp Glu Leu Glu Val Leu Gln Val Pro Cys Gly Glu Gln
                85                  90                  95
Leu Leu Arg Arg Arg
                100
```

```
<210> 6171
<211> 1130
<212> DNA
<213> Homo sapiens


<400> 6171
nncccgctag gagttcctag taaagtggcg ggagccgcag ctatggagcc gcaggaggag
60
agagaaacgc aggttgctgc gtggttaaaa aaaatatttg gagatcatcc tattccacag
120
tatgaggtga acccacggac cacagagatt ttcatcacc tttcagaacg caacagggtc
180
cgggacaggg atgtctacct ggtaatagag gacttgaagc agaaagcaag tgaatacgag
240
tcagaagcca agtatcttca agaccttctc atggagagtg tgaattttc ccccgccaat
300
ctctctagca ctggttccag gtatctgaat gctttggttg acagtgcggt ggcccttgaa
360
acaaaggata cctcgctagc tagtttatc cctgcagtga atgatttgac ctctgatctc
420
tttcgtacca aatccaaaag tgaagaaatc aagattgaac tggaaaaact tgaaaaaaat
480
ttaactgcaa ctttagtatt agaaaaatgt ctacaagagg atgtcaagaa agcagagttg
540
catctgtcta cagaaagggc caaagttgat aatcgtcgtc agaacatgga ctttctaaaa
600
gcaaagtcag aggaattcag atttggaatc aaggctgcag aggagcaact ttcagccaga
660
ggcatggatg cttctctgtc tcatcagtcc ttagtagcac tatcagaaa actggcaaga
720
ttaaagcaac agactatacc tttgaagaaa aaattggagt cctatttaga cttaatgccg
780
aatccgtctc ttgctcaagt gaaaattgaa gaagcaaagc gagaactaga tagcattgaa
840
gctgaactta caagaagagt agacatgatg gaactgtgac aaaagccaaa taaacatcct
900
tttccctaac aaagtaaatt gaataggact ttacagagtt cttttttcctc ttggcatttc
960
ctaataacaa aactttctgt gttcttagat tacagaatat cataattgat agaatatggt
1020
```

5352

ttcttactgt gtgttgcatt tttgtgccca aatacatagt tttcatatta aaaagccttt
1080
tctcttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1130

<210> 6172
<211> 292
<212> PRT
<213> Homo sapiens

<400> 6172
Xaa Pro Leu Gly Val Pro Ser Lys Val Ala Gly Ala Ala Ala Met Glu
1   5   10   15
Pro Gln Glu Glu Arg Glu Thr Gln Val Ala Ala Trp Leu Lys Lys Ile
            20   25   30
Phe Gly Asp His Pro Ile Pro Gln Tyr Glu Val Asn Pro Arg Thr Thr
        35   40   45
Glu Ile Leu His His Leu Ser Glu Arg Asn Arg Val Arg Asp Arg Asp
    50   55   60
Val Tyr Leu Val Ile Glu Asp Leu Lys Gln Lys Ala Ser Glu Tyr Glu
65   70   75   80
Ser Glu Ala Lys Tyr Leu Gln Asp Leu Leu Met Glu Ser Val Asn Phe
                85   90   95
Ser Pro Ala Asn Leu Ser Ser Thr Gly Ser Arg Tyr Leu Asn Ala Leu
            100   105   110
Val Asp Ser Ala Val Ala Leu Glu Thr Lys Asp Thr Ser Leu Ala Ser
        115   120   125
Phe Ile Pro Ala Val Asn Asp Leu Thr Ser Asp Leu Phe Arg Thr Lys
        130   135   140
Ser Lys Ser Glu Glu Ile Lys Ile Glu Leu Glu Lys Leu Glu Lys Asn
145   150   155   160
Leu Thr Ala Thr Leu Val Leu Glu Lys Cys Leu Gln Glu Asp Val Lys
                165   170   175
Lys Ala Glu Leu His Leu Ser Thr Glu Arg Ala Lys Val Asp Asn Arg
            180   185   190
Arg Gln Asn Met Asp Phe Leu Lys Ala Lys Ser Glu Glu Phe Arg Phe
            195   200   205
Gly Ile Lys Ala Ala Glu Glu Gln Leu Ser Ala Arg Gly Met Asp Ala
        210   215   220
Ser Leu Ser His Gln Ser Leu Val Ala Leu Ser Glu Lys Leu Ala Arg
225   230   235   240
Leu Lys Gln Gln Thr Ile Pro Leu Lys Lys Lys Leu Glu Ser Tyr Leu
                245   250   255
Asp Leu Met Pro Asn Pro Ser Leu Ala Gln Val Lys Ile Glu Glu Ala
            260   265   270
Lys Arg Glu Leu Asp Ser Ile Glu Ala Glu Leu Thr Arg Arg Val Asp
        275   280   285
Met Met Glu Leu
    290

<210> 6173
<211> 1483
<212> DNA
<213> Homo sapiens

                            5353

```
<400> 6173
agagagagag actagttctc tcttactcta ggcctttcgg tttgcgcgac ggggcaggaa
60
agcgtgcgtg cggctaagag agtgggcgct ctcgcggcgc tgacgatgga agaactggag
120
caaggcctgt tgatgcagcc atgggcgtgg ctacagcttg cagagaactc cctcttggcc
180
aaggttttta tcaccaagca gggctatgcc ttgttggttt cagatcttca acaggtgtgg
240
catgaacagg tggacactag tgtggtcagc cagcgagcca aggagctgaa caagcggctc
300
actgctcctc ctgcagcttt cctctgtcat ttggataatc tccttcgccc attgttgaag
360
gacgctgctc accctagcga agctaccttc tcctgtgatt gtgtggcaga tgcactgatt
420
ctacgggtgc gaagtgagct ctctggcctc cccttctatt ggaatttcca ctgcatgcta
480
gctagtcctt ccctggtctc ccaacatttg attcgtcctc tgatgggcat gagtctggca
540
ttacagtgcc aagtgaggga gctagcaacg ttacttcata tgaaagacct agagatccaa
600
gactaccagg agagtggggc tacgctgatt cgagatcgat tgaagacaga accatttgaa
660
gaaaattcct tcttggaaca atttatgata gagaaactgc cagaggcatg cagcattggt
720
gatggaaagc cctttgtcat gaatctgcag gatctgtata tggcagtcac cacacaagag
780
gtccaagtgg gacagaagca tcaaggcgct ggagatcctc atacctcaaa cagtgcttcc
840
ctgcaaggaa tcgatagcca atgtgtaaac cagccagaac aactggtctc ctcagcccca
900
accctctcag cacctgagaa agagtccacg ggtacttcag gccctctgca gagacctcag
960
ctgtcaaagg tcaagaggaa gaatccaagg ggtctcttca gttaatctgt tgtggcctca
1020
gctgctgagg atggacttgg agaatagctt ccaagcttca ccttgaaaga agcttacatg
1080
gcagcaatat ttctaaaata gtgatacagt cagaggcctc ctgtaagggc gagagaactg
1140
aagttgatgt tgacaggccc acagggaatt ggccttccct gttcaagtgg aagccagtct
1200
ctgagaatcc cgtgctctcc tctcttttgg tggaggttct gtaggttcag gtttctacca
1260
tggactttag gtatataggg caagtcagca agaaagcacc acacactcag gaagccttgt
1320
ctacctttcc ctagcgtctc tagccagcca gccccagata ctcctcagag acccacttct
1380
ctcttttgca tggaataaaa agcactcaca gtccctgctt ttgggattaa aaaacaaaaa
1440
gaaaaaaaaa aaaaaaaaa aaaaaaaaat cctcatgccg aat
1483

<210> 6174
```

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<211> 299
<212> PRT
<213> Homo sapiens

<400> 6174
Met Glu Glu Leu Glu Gln Gly Leu Leu Met Gln Pro Trp Ala Trp Leu
1               5                   10                  15
Gln Leu Ala Glu Asn Ser Leu Leu Ala Lys Val Phe Ile Thr Lys Gln
            20                  25                  30
Gly Tyr Ala Leu Leu Val Ser Asp Leu Gln Gln Val Trp His Glu Gln
        35                  40                  45
Val Asp Thr Ser Val Val Ser Gln Arg Ala Lys Glu Leu Asn Lys Arg
    50                  55                  60
Leu Thr Ala Pro Pro Ala Ala Phe Leu Cys His Leu Asp Asn Leu Leu
65                  70                  75                  80
Arg Pro Leu Leu Lys Asp Ala Ala His Pro Ser Glu Ala Thr Phe Ser
                85                  90                  95
Cys Asp Cys Val Ala Asp Ala Leu Ile Leu Arg Val Arg Ser Glu Leu
            100                 105                 110
Ser Gly Leu Pro Phe Tyr Trp Asn Phe His Cys Met Leu Ala Ser Pro
        115                 120                 125
Ser Leu Val Ser Gln His Leu Ile Arg Pro Leu Met Gly Met Ser Leu
    130                 135                 140
Ala Leu Gln Cys Gln Val Arg Glu Leu Ala Thr Leu Leu His Met Lys
145                 150                 155                 160
Asp Leu Glu Ile Gln Asp Tyr Gln Glu Ser Gly Ala Thr Leu Ile Arg
                165                 170                 175
Asp Arg Leu Lys Thr Glu Pro Phe Glu Glu Asn Ser Phe Leu Glu Gln
            180                 185                 190
Phe Met Ile Glu Lys Leu Pro Glu Ala Cys Ser Ile Gly Asp Gly Lys
        195                 200                 205
Pro Phe Val Met Asn Leu Gln Asp Leu Tyr Met Ala Val Thr Thr Gln
    210                 215                 220
Glu Val Gln Val Gly Gln Lys His Gln Gly Ala Gly Asp Pro His Thr
225                 230                 235                 240
Ser Asn Ser Ala Ser Leu Gln Gly Ile Asp Ser Gln Cys Val Asn Gln
                245                 250                 255
Pro Glu Gln Leu Val Ser Ser Ala Pro Thr Leu Ser Ala Pro Glu Lys
            260                 265                 270
Glu Ser Thr Gly Thr Ser Gly Pro Leu Gln Arg Pro Gln Leu Ser Lys
        275                 280                 285
Val Lys Arg Lys Asn Pro Arg Gly Leu Phe Ser
    290                 295

<210> 6175
<211> 349
<212> DNA
<213> Homo sapiens

<400> 6175
acgcgtttgc cgggagatgc ggccgcttcg tcctctgcag ttaagaagct gggcgcgtcg
60
aggactggga tttcaaatat gcgtgcatta gagaatgact ttttcaattc tcccccaaga
120
```

aaaactgttc agtttggtgg aactgtgaca gaagtcttgc tgaagtacaa aaagggtgaa
180
acaaatgact ttgagttgtt gaagaaccag ctgttagatc cagacataaa gagattgcct
240
tggttgaata gaagtcaaac agtagtggaa gagtatttgg cttttcttgg taatcttgta
300
tcagcacaga ctgtttttcct cagaccgtgt ctcagcatga ttgcttccc
349

<210> 6176
<211> 90
<212> PRT
<213> Homo sapiens

<400> 6176
Met Arg Ala Leu Glu Asn Asp Phe Phe Asn Ser Pro Pro Arg Lys Thr
1   5   10   15
Val Gln Phe Gly Gly Thr Val Thr Glu Val Leu Leu Lys Tyr Lys Lys
            20   25   30
Gly Glu Thr Asn Asp Phe Glu Leu Leu Lys Asn Gln Leu Leu Asp Pro
            35   40   45
Asp Ile Lys Arg Leu Pro Trp Leu Asn Arg Ser Gln Thr Val Val Glu
        50   55   60
Glu Tyr Leu Ala Phe Leu Gly Asn Leu Val Ser Ala Gln Thr Val Phe
65   70   75   80
Leu Arg Pro Cys Leu Ser Met Ile Ala Ser
                85   90

<210> 6177
<211> 1536
<212> DNA
<213> Homo sapiens

<400> 6177
cggcccaacc atggcgtcct ccgcggccgg ctgcgtggtg atcgttggca gaattaaaac
60
tctgtaccca ttgaacaaca gctgctcatt tcccccagcc ccagcccctg gcatccaccc
120
ttctagcttt ctgtctctat gggtacctca gtggagtcat tgggcgaatg ggccatgctg
180
tttgccagtg gaggcttcca ggtgaaactc tatgacattg agcaacagca gataaggaac
240
gccctggaaa acatcagaaa ggagatgaag ttgctggagc aggcaggttc tctgaaaggc
300
tccctgagtg tggaagagca gctgtcactc atcagtggtt gtcccaatat ccaagaagca
360
gtagagggtg ccatgcacat tcaggaatgt gttccagaag atctagaact gaagaagaag
420
atttttgctc agttagattc catcattgat gatcgagtga tcttaagcag ttccacttct
480
tgtctcatgc cttccaagtt gtttgctggc ttggtccatg tgaagcaatg catcgtggct
540
catcctgtga atccgccata ctacatcccg ctggttgagc tggtccccca cccggagacg
600

5356

```
gcccctacga cagtggacag aacccacgcc ctgatgaaga agattgganc agtgccccat
660
gcgagtccag aaggaggtgg ccggcttcgt tctgaaccgc ctgcaatatg caatcatcag
720
cgaggcctgg cggctagtgg aggaaggaat ncgtgtctcc tagtgacctg gnaccttgtc
780
atgtcagaag ggttgggcat gcggtatgca ttcattggac ccctggaaac catgcatctc
840
aatgcagaag gtatgttaag ctactgcgac agatacagcg aaggcataaa acatgtccta
900
cagacttttg gacccattcc agagttttcc agggccactg ctgagaaggt taaccaggac
960
atgtgcatga aggtccctga tgacccggag cacttagctg ccaggaggca gtggagggac
1020
gagtgcctca tgagactcgc caagttgaag agtcaagtgc agccccagtg aatttcttgt
1080
aatgcagctt ccactcctct cattggaggc cctatttggg aacactgcaa gcccttaatc
1140
agccctctgt gacataggta gcagcccacg gagatcctaa gctggctgtc ttgtgtgcag
1200
cctgagtggg gtggtgcagg ccggtagtct gcccgtcact ttggatcata gccctgggcc
1260
tggcggcaca gcagcacttg cgttctcggg gctgtcgatt tcctgccacc tgggcagata
1320
acctggagat ttccaccttt tcttttcagc ttgattgcat ttgactatat tttacagcca
1380
gtgattgtag tttcatgtta atatgtggca aaatattttt gtaattattt tctaatccct
1440
ttctgagtac tctggggccc tgcatttatg aggcacctac cttcattttg ctaacgctta
1500
ttctgaataa aagtttttga ttccttaaaa aaaaaa
1536
```

```
<210> 6178
<211> 310
<212> PRT
<213> Homo sapiens

<400> 6178
Met Gly Thr Ser Val Glu Ser Leu Gly Glu Trp Ala Met Leu Phe Ala
1               5                   10                  15
Ser Gly Gly Phe Gln Val Lys Leu Tyr Asp Ile Glu Gln Gln Gln Ile
            20                  25                  30
Arg Asn Ala Leu Glu Asn Ile Arg Lys Glu Met Lys Leu Leu Glu Gln
        35                  40                  45
Ala Gly Ser Leu Lys Gly Ser Leu Ser Val Glu Glu Gln Leu Ser Leu
    50                  55                  60
Ile Ser Gly Cys Pro Asn Ile Gln Glu Ala Val Glu Gly Ala Met His
65                  70                  75                  80
Ile Gln Glu Cys Val Pro Glu Asp Leu Glu Leu Lys Lys Lys Ile Phe
                85                  90                  95
Ala Gln Leu Asp Ser Ile Ile Asp Asp Arg Val Ile Leu Ser Ser Ser
            100                 105                 110
Thr Ser Cys Leu Met Pro Ser Lys Leu Phe Ala Gly Leu Val His Val
```

```
              115                  120                  125
Lys Gln Cys Ile Val Ala His Pro Val Asn Pro Pro Tyr Tyr Ile Pro
        130                  135                  140
Leu Val Glu Leu Val Pro His Pro Glu Thr Ala Pro Thr Thr Val Asp
145                  150                  155                  160
Arg Thr His Ala Leu Met Lys Lys Ile Gly Xaa Val Pro His Ala Ser
                165                  170                  175
Pro Glu Gly Gly Gly Arg Leu Arg Ser Glu Pro Pro Ala Ile Cys Asn
                180                  185                  190
His Gln Arg Gly Leu Ala Ala Ser Gly Gly Arg Asn Xaa Cys Leu Leu
        195                  200                  205
Val Thr Trp Xaa Leu Val Met Ser Glu Gly Leu Gly Met Arg Tyr Ala
        210                  215                  220
Phe Ile Gly Pro Leu Glu Thr Met His Leu Asn Ala Glu Gly Met Leu
225                  230                  235                  240
Ser Tyr Cys Asp Arg Tyr Ser Glu Gly Ile Lys His Val Leu Gln Thr
                245                  250                  255
Phe Gly Pro Ile Pro Glu Phe Ser Arg Ala Thr Ala Glu Lys Val Asn
                260                  265                  270
Gln Asp Met Cys Met Lys Val Pro Asp Asp Pro Glu His Leu Ala Ala
        275                  280                  285
Arg Arg Gln Trp Arg Asp Glu Cys Leu Met Arg Leu Ala Lys Leu Lys
        290                  295                  300
Ser Gln Val Gln Pro Gln
305                  310
```

```
<210> 6179
<211> 2940
<212> DNA
<213> Homo sapiens
```

```
<400> 6179
nnctgcaggt ggcgcgggag gctacgcgcg gggcgggtgc tgcttgctgc aggctctggg
60
gagtcgccat gcctacaaca cagcagtccc ctcaggatga gcaggaaaag ctcttggatg
120
aagccataca ggctgtgaag gtccagtcat tccaaatgaa gagatgcctg gacaaaaaca
180
agcttatgga tgctctaaaa catgcttcta atatgcttgg tgaactccgg acttctatgt
240
tatcaccaaa gagttactat gaactttata tggccatttc tgatgaactg cactacttgg
300
aggntctacc tgacagatga gtttgctaaa ggaaggaaag tggcagatct ctacgaactt
360
gtacagtatg ctggaaacat tatcccaagg ctttaccttt tgatcacagt tggagttgta
420
tatgtcaagt catttcctca gtccaggaag gatattttga aagatttggt agaaatgtgc
480
cgtggtgtgc aacatccctt gaggggtctg tttcttcgaa attaccttct tcagtgtacc
540
agaaatatct tacctgatga aggagagcca acagatgaag aaacaactgg tgacatcagt
600
gattccatgg attttgtact gctcaacttt gcagaaatga acaagctctg ggtgcgaatg
660
```

```
cagcatcagg gacatagccg agatagagaa aaaagagaac gagaaagaca agaactgaga
720
attttagtgg gaacaaattt ggtgcgcctc agtnncagtt ggaggtgtaa atgtggaacg
780
ttacaacaga ttgttttgac tggcatattg gagcaagttg taaactgtag ggatgctttg
840
gctcaagaat atctcatgga gtgtattatt caggttttcc ctgatgaatt tcacctccag
900
actttgaatc cttttcttcg ggcctgtgct gagttacacc agaatgtaaa tgtgaagaac
960
ataatcattg ctttaattga tagattagct ttatttgctc accgtgaaga tggacctgga
1020
atcccagcgg atattaaact ttttgatata ttttcacagc aggtggctac agtgatacag
1080
tctagacaag acatgccttc agaggatgtt gtatctttac aagtctctct gattaatctt
1140
gccatgaaat gttaccctga tcgtgtggac tatgttgata aagttctaga aacaacagtg
1200
gagatattca ataagctcaa ccttgaacat attgctacca gtagtgcagt ttcaaaggaa
1260
ctcaccagac ttttgaaaat accagttgac acttacaaca atattttaac agtcttgaaa
1320
ttaaaacatt ttcacccact ctttgagtac tttgactacg agtccagaaa gagcatgagt
1380
tgttatgtgc ttagtaatgt tctggattat aacacagaaa ttgtctctca agaccaggtg
1440
gattccataa tgaatttggt atccacgttg attcaagatc agccagatca acctgtagaa
1500
gaccctgatc cagaagattt tgctgatgag cagagccttg tgggccgctt cattcatctg
1560
ctgcgctctg aggaccctga ccagcagtac ttgattttga acacagcacg aaaacatttt
1620
ggagctggtg gaaatcagcg gattcgcttc acactgccac ctttggtatt tgcagcttac
1680
cagctggctt ttcgatataa agagaattct aagtggatga caaatgggaa aagaaatgcc
1740
agaagatttt ttcatttgcc cnaccagact atcagtgctt tgatcaaagc agagctggca
1800
gaattgccct taagactttt tcttcaagga gcactagctg ctggggaaat tggttttgaa
1860
aatcatgaga cagtcgcata tgaattcatg tcccaggcat tttctctgta tgaagatgaa
1920
atcagcgatt ccaaagcaca gctagctgcc atcaccttga tcattggcac ttttgaaagg
1980
atgaagtgct tcagtgaaga gaatcatgaa cctctgagga ctcagtgtgc ccttgctgca
2040
tccaaacttc taaagaaacc tgatcagggc cgagctgagc acctgtgcac atctctttgg
2100
tctggcagaa acacggacaa aaatggggag gagcttcacg gaggcaagag ggtaatggag
2160
tgcctaaaaa aagctctaaa aatagcaaat cagtgcatgg acccctctct acaagtgcag
2220
cttttttatag aaattctgaa cagatatatc tatttttatg aaaaggaaaa tgatgcggta
2280
```

5359

```
acaattcagg ttttaaacca gcttatccaa aagattcgag aagacctccc gaatcttgaa
2340
tccagtgaag aaacagagca gattaacaaa cattttcata acacactgga gcatttgcgc
2400
ttgcggcggg aatcaccaga atccgagggg ccaatttatg aaggtctcat cctttaaaaa
2460
ggaaatagct caccatactc ctttccatgt acatccagtg agggtttttat tacgctaggt
2520
ttcccttcca tagattgtgc ctttcagaaa tgctgaggta ggtttcccat ttcttacctg
2580
tgatgtgttt tacccagcac ctccggacac tcaccttcag gaccttaata aaattattca
2640
cttggtaagt gttcaagtct ttctgatcac cccaagtagc atgactgatc tgcaattttt
2700
agagcttttt ttaggcactc cattaccctc ttgcctccgt gaagctcctc cccatttttg
2760
tccgtgtttc tgccagacca gaagagatgt gcacaggtgc tcacagctcg gccctgatca
2820
ggtttcttta gaagtttgga tgcagcaagg gcacactgag tcctcagagg ttcatgattc
2880
tcttcactga agcacttcat cctttcaaaa gtgccaatga tcaaggtgat ggcagctagc
2940
```

```
<210> 6180
<211> 751
<212> PRT
<213> Homo sapiens
```

```
<400> 6180
Met Leu Leu Ile Cys Leu Val Asn Ser Gly Leu Leu Cys Tyr His Gln
1               5                   10                  15
Arg Val Thr Met Asn Phe Ile Trp Pro Phe Leu Met Asn Cys Thr Thr
            20                  25                  30
Trp Arg Xaa Tyr Leu Thr Asp Glu Phe Ala Lys Gly Arg Lys Val Ala
        35                  40                  45
Asp Leu Tyr Glu Leu Val Gln Tyr Ala Gly Asn Ile Ile Pro Arg Leu
    50                  55                  60
Tyr Leu Leu Ile Thr Val Gly Val Val Tyr Val Lys Ser Phe Pro Gln
65                  70                  75                  80
Ser Arg Lys Asp Ile Leu Lys Asp Leu Val Glu Met Cys Arg Gly Val
                85                  90                  95
Gln His Pro Leu Arg Gly Leu Phe Leu Arg Asn Tyr Leu Leu Gln Cys
            100                 105                 110
Thr Arg Asn Ile Leu Pro Asp Glu Gly Glu Pro Thr Asp Glu Glu Thr
            115                 120                 125
Thr Gly Asp Ile Ser Asp Ser Met Asp Phe Val Leu Leu Asn Phe Ala
    130                 135                 140
Glu Met Asn Lys Leu Trp Val Arg Met Gln His Gln Gly His Ser Arg
145                 150                 155                 160
Asp Arg Glu Lys Arg Glu Arg Glu Arg Gln Glu Leu Arg Ile Leu Val
                165                 170                 175
Gly Thr Asn Leu Val Arg Leu Ser Xaa Ser Trp Arg Cys Lys Cys Gly
            180                 185                 190
Thr Leu Gln Gln Ile Val Leu Thr Gly Ile Leu Glu Gln Val Val Asn
```

```
                195                  200                  205
Cys Arg Asp Ala Leu Ala Gln Glu Tyr Leu Met Glu Cys Ile Ile Gln
        210                  215                  220
Val Phe Pro Asp Glu Phe His Leu Gln Thr Leu Asn Pro Phe Leu Arg
225                  230                  235                  240
Ala Cys Ala Glu Leu His Gln Asn Val Asn Val Lys Asn Ile Ile Ile
                245                  250                  255
Ala Leu Ile Asp Arg Leu Ala Leu Phe Ala His Arg Glu Asp Gly Pro
                260                  265                  270
Gly Ile Pro Ala Asp Ile Lys Leu Phe Asp Ile Phe Ser Gln Gln Val
        275                  280                  285
Ala Thr Val Ile Gln Ser Arg Gln Asp Met Pro Ser Glu Asp Val Val
        290                  295                  300
Ser Leu Gln Val Ser Leu Ile Asn Leu Ala Met Lys Cys Tyr Pro Asp
305                  310                  315                  320
Arg Val Asp Tyr Val Asp Lys Val Leu Glu Thr Thr Val Glu Ile Phe
                325                  330                  335
Asn Lys Leu Asn Leu Glu His Ile Ala Thr Ser Ser Ala Val Ser Lys
                340                  345                  350
Glu Leu Thr Arg Leu Leu Lys Ile Pro Val Asp Thr Tyr Asn Asn Ile
        355                  360                  365
Leu Thr Val Leu Lys Leu Lys His Phe His Pro Leu Phe Glu Tyr Phe
        370                  375                  380
Asp Tyr Glu Ser Arg Lys Ser Met Ser Cys Tyr Val Leu Ser Asn Val
385                  390                  395                  400
Leu Asp Tyr Asn Thr Glu Ile Val Ser Gln Asp Gln Val Asp Ser Ile
                405                  410                  415
Met Asn Leu Val Ser Thr Leu Ile Gln Asp Gln Pro Asp Gln Pro Val
                420                  425                  430
Glu Asp Pro Asp Pro Glu Asp Phe Ala Asp Glu Gln Ser Leu Val Gly
        435                  440                  445
Arg Phe Ile His Leu Leu Arg Ser Glu Asp Pro Asp Gln Gln Tyr Leu
        450                  455                  460
Ile Leu Asn Thr Ala Arg Lys His Phe Gly Ala Gly Gly Asn Gln Arg
465                  470                  475                  480
Ile Arg Phe Thr Leu Pro Pro Leu Val Phe Ala Ala Tyr Gln Leu Ala
                485                  490                  495
Phe Arg Tyr Lys Glu Asn Ser Lys Trp Met Thr Asn Gly Lys Arg Asn
        500                  505                  510
Ala Arg Arg Phe Phe His Leu Pro Xaa Gln Thr Ile Ser Ala Leu Ile
        515                  520                  525
Lys Ala Glu Leu Ala Glu Leu Pro Leu Arg Leu Phe Leu Gln Gly Ala
        530                  535                  540
Leu Ala Ala Gly Glu Ile Gly Phe Glu Asn His Glu Thr Val Ala Tyr
545                  550                  555                  560
Glu Phe Met Ser Gln Ala Phe Ser Leu Tyr Glu Asp Glu Ile Ser Asp
                565                  570                  575
Ser Lys Ala Gln Leu Ala Ala Ile Thr Leu Ile Ile Gly Thr Phe Glu
                580                  585                  590
Arg Met Lys Cys Phe Ser Glu Glu Asn His Glu Pro Leu Arg Thr Gln
        595                  600                  605
Cys Ala Leu Ala Ala Ser Lys Leu Leu Lys Lys Pro Asp Gln Gly Arg
        610                  615                  620
Ala Glu His Leu Cys Thr Ser Leu Trp Ser Gly Arg Asn Thr Asp Lys
```

5361

```
625                   630                   635                   640
Asn Gly Glu Glu Leu His Gly Gly Lys Arg Val Met Glu Cys Leu Lys
                    645                   650                   655
Lys Ala Leu Lys Ile Ala Asn Gln Cys Met Asp Pro Ser Leu Gln Val
              660                   665                   670
Gln Leu Phe Ile Glu Ile Leu Asn Arg Tyr Ile Tyr Phe Tyr Glu Lys
          675                   680                   685
Glu Asn Asp Ala Val Thr Ile Gln Val Leu Asn Gln Leu Ile Gln Lys
      690                   695                   700
Ile Arg Glu Asp Leu Pro Asn Leu Glu Ser Ser Glu Glu Thr Glu Gln
705                   710                   715                   720
Ile Asn Lys His Phe His Asn Thr Leu Glu His Leu Arg Leu Arg Arg
                725                   730                   735
Glu Ser Pro Glu Ser Glu Gly Pro Ile Tyr Glu Gly Leu Ile Leu
            740                   745                   750
```

```
<210> 6181
<211> 1135
<212> DNA
<213> Homo sapiens

<400> 6181
gccaagcgct actcctggtc cggcatgggc cgcatccaca agggcatccg cgagcagggc
60
cggtacctca acagccggcc ctccatccag aagcccgagg tcttcttcct gcccgacctg
120
cccaccacgc cctatttctc ccgggacgca cagaaacatg atgtggaagt gctggaacgg
180
aacttccaga ccatcctgtg tgagtttgag accctctaca agctttctc aaactgcagc
240
ctcccgcaag gatggaaaat gaacagcacc cccagcgggg agtggttcac cttttacttg
300
gtcaatcagg gggtttgtgt tcccaggaac tgtaggaagt gcccacggac gtaccgcttg
360
ctcggaagcc ttcggacctg tattgggaac aatgtttttg ggaacgcgtg catctctgtg
420
ctgagccctg ggactgtgat aacggagcac tatggaccca ccaacatccg catccgatgc
480
catttaggtc tgaaaactcc aaatggctgt gagctggtgg tggggggaga gccccagtgc
540
tgggcagaag ggcgctgcct tctctttgat gactctttcc tgcatgctgc gttccatgaa
600
ggttcagcag aggatggccc acgggtggtt ttcatggtgg atttgtggca tccaaacgtc
660
gcagcggccg aacggcaggc tcttgatttc atctttgctc cgggacgatg agagtatttc
720
ccatgctgga gtcggcgaga agggccgagg cggggcctgg gcagactgtg gtccggtcca
780
gtccctaccg gtgttgtttc catgctcaga aacctgcctc agcggaaagc tcttatttgg
840
gattttatat catgtcgggt ccctctttcc cttggttatt gtaaatggaa acttttcggc
900
ttgtatttcc ttagattttt tttttttcct tccaatcatt tgcttcagag actcctttct
960
```

5362

ggcctaacag cgcattcctt tgattggtcc ttgagtgacc agagacttag tgcccttgta
1020
agtctgtctt ctgttgctac ttgttttttt cagtgctctg aaatagagta actaaatggt
1080
tatttgtctg aatataataa tgtaaaactt cttgtggtca tcttaaaaaa aaaaa
1135

<210> 6182
<211> 236
<212> PRT
<213> Homo sapiens

<400> 6182
Ala Lys Arg Tyr Ser Trp Ser Gly Met Gly Arg Ile His Lys Gly Ile
1   5   10   15
Arg Glu Gln Gly Arg Tyr Leu Asn Ser Arg Pro Ser Ile Gln Lys Pro
            20   25   30
Glu Val Phe Phe Leu Pro Asp Leu Pro Thr Thr Pro Tyr Phe Ser Arg
        35   40   45
Asp Ala Gln Lys His Asp Val Glu Val Leu Glu Arg Asn Phe Gln Thr
        50   55   60
Ile Leu Cys Glu Phe Glu Thr Leu Tyr Lys Ala Phe Ser Asn Cys Ser
65   70   75   80
Leu Pro Gln Gly Trp Lys Met Asn Ser Thr Pro Ser Gly Glu Trp Phe
                85   90   95
Thr Phe Tyr Leu Val Asn Gln Gly Val Cys Val Pro Arg Asn Cys Arg
                100   105   110
Lys Cys Pro Arg Thr Tyr Arg Leu Leu Gly Ser Leu Arg Thr Cys Ile
            115   120   125
Gly Asn Asn Val Phe Gly Asn Ala Cys Ile Ser Val Leu Ser Pro Gly
        130   135   140
Thr Val Ile Thr Glu His Tyr Gly Pro Thr Asn Ile Arg Ile Arg Cys
145   150   155   160
His Leu Gly Leu Lys Thr Pro Asn Gly Cys Glu Leu Val Val Gly Gly
                165   170   175
Glu Pro Gln Cys Trp Ala Glu Gly Arg Cys Leu Leu Phe Asp Asp Ser
                180   185   190
Phe Leu His Ala Ala Phe His Glu Gly Ser Ala Glu Asp Gly Pro Arg
            195   200   205
Val Val Phe Met Val Asp Leu Trp His Pro Asn Val Ala Ala Ala Glu
        210   215   220
Arg Gln Ala Leu Asp Phe Ile Phe Ala Pro Gly Arg
225   230   235

<210> 6183
<211> 2530
<212> DNA
<213> Homo sapiens

<400> 6183
acgcgtcggt cgttggggcg ttgagcaagt gcgaccccgg agtcatttgg gctggggttg
60
gaggattagc atctgccatt gactcgcatt aaagggccca gcgtctcgcg tgagaggttg
120

5363

```
aggttgtgtt gcgggggtcg ggtagctgta ggtcttagaa atggcatcaa aggtggcctt
180
ggcgaagttg cccagggtgg cagtgcagcc ccgggctgag gtgtagcagt catcgatacc
240
agccatcatg agcagcttct taggcacagg tgcggagacg atgccagtgc ccctgggtgc
300
agggatgagg cgtaccagca cagagccgca gcggcctgtc acctggtgag ggaaggagtc
360
aggagacggg ggcccgaggg agcctgcccc acggcaggcc catcacctgc caccagccta
420
ccttgcaagg gacagtgtgg ggcttgccga tcttgttccc ccagtagcct ctgcgcacgg
480
ggacgatgga gagcttggcc aggatgatgg ccccacggat ggcggtggcc acctccttgg
540
agcacttaac acccagaccg acgtggccat tgtagtcccc gatagcaaca aatgccttga
600
acctggtgcg ctggccggca cgggtctgct tctgcactgg cataatcttc aaaacctcat
660
ccttgagaga ggcccccagg aaaaagtcaa tgatctctga ttccttaatg ggcagagaga
720
agagatagat ctcctccagg gacttgatct tcatgtcctt gaccaagcgg cccaacttgg
780
tgacgggcat ccactcctta tctccggcct tgcctccgcg agctccgcgg cctcggcccc
840
ggccccgtcc acggccgcga ccccggccct ggtggccctg ggatggggaa ccgcggtggc
900
ttccgcggag gtttcggcag tggcatccgg ggccggggtc gcggccgtgg acggggccgg
960
ggccgaggcc gcggagctcg cggaggcaag gccgaggata aggagtggat gcccgtcacc
1020
aagttgggcc gcttggtcaa ggacatgaag atcaagtccc tggaggagat ctatctcttc
1080
tccctgccca ttaaggaatc agagatcatt gatttcttcc tggggggcctc tctcaaggat
1140
gaggttttga agattatgcc agtgcagaag cagacccgtg ccggccagcg caccaggttc
1200
aaggcatttg ttgctatcgg ggactacaat ggccacgtcg gtctgggtgt taagtgctcc
1260
aaggaggtgg ccaccgccat ccgtggggcc atcatcctgg ccaagctctc catcgtcccc
1320
gtgcgcagag gctactgggg gaacaagatc ggcaagcccc acactgtccc ttgcaaggtg
1380
acaggccgct gcggctctgt gctggtacgc ctcatccctg cacccagggg cactggcatc
1440
gtctccgcac ctgtgcctaa gaagctgctc atgatggctg gtatcgatga ctgctacacc
1500
tcagcccggg gctgcactgc caccctgggc aacttcgcca aggccacctt tgatgccatt
1560
tctaagacct acagctacct gaccccccgac ctctggaagg agactgtatt caccaagtct
1620
ccctatcagg agttcactga ccacctcgtc aagacccaca ccagagtctc cgtgcagcgg
1680
actcaggctc cagctgtggc tacaacatag ggtttttata caagaaaaat aaagtgaatt
1740
```

5364

```
aagctgtcac cccaccatgg agaaaagagt cttttggttc tttttaacat aagtgattag
1800
tttaagagta tgctgaggag ccactgggct taaagaagga tgtaaataag acccaaatac
1860
atagggacca ggcgctgctt tctcatgttc acaaaagcag tcctccacca ctgaactcca
1920
ttctctcagg gggctcaatg aaggctaacc aatccgatgc atgtgtaggt aacagtccca
1980
tggactggca cttgtaaaca gccaatgcca aacccatcag gttcccaatg agatagacca
2040
aaccctgaag aaacttctgg cttgaacttt ctaacatctt gaaagtggct gaaatggcca
2100
taagtgcctg aatgggtcgc caggccatca tacacaccat catagtaggg aagatggaga
2160
tagtattgcc tgccatgtac atgatgaaga gattcatggg aatctgtttg aggggaccca
2220
aggcgatgtc ccagcagcgc ttctccacca ggatccggtc tgtctcttgc acgctggtat
2280
caggcacttg cttgtccaag taaccgactg ggtagagcga gtctccctgg ccactgcccc
2340
ggtcacttcg acccctgctg cctcctccag gcccgcttag ctcaatggcc cacttgaagc
2400
gccggcctcg gttagccacc aggcccccct gggccgtcat ggcaacagct gcgtcctata
2460
gcctcgatgc ttctcagtcc aaagcgtact ccacaacagg cccaccagcg ttctccgctt
2520
tgtctcaccc
2530
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<210> 6184
<211> 308
<212> PRT
<213> Homo sapiens

<400> 6184

```
Arg Ala Ser Thr Pro Tyr Leu Arg Pro Cys Leu Arg Glu Leu Arg Gly
1               5                   10                  15
Leu Gly Pro Gly Pro Val His Gly Arg Asp Pro Gly Pro Gly Gly Pro
            20                  25                  30
Gly Met Gly Asn Arg Gly Gly Phe Arg Gly Gly Phe Gly Ser Gly Ile
            35                  40                  45
Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly
        50                  55                  60
Ala Arg Gly Gly Lys Ala Glu Asp Lys Glu Trp Met Pro Val Thr Lys
65                  70                  75                  80
Leu Gly Arg Leu Val Lys Asp Met Lys Ile Lys Ser Leu Glu Glu Ile
                85                  90                  95
Tyr Leu Phe Ser Leu Pro Ile Lys Glu Ser Glu Ile Ile Asp Phe Phe
                100                 105                 110
Leu Gly Ala Ser Leu Lys Asp Glu Val Leu Lys Ile Met Pro Val Gln
            115                 120                 125
Lys Gln Thr Arg Ala Gly Gln Arg Thr Arg Phe Lys Ala Phe Val Ala
        130                 135                 140
Ile Gly Asp Tyr Asn Gly His Val Gly Leu Gly Val Lys Cys Ser Lys
```

5365

```
145                    150                    155                    160
Glu Val Ala Thr Ala Ile Arg Gly Ala Ile Ile Leu Ala Lys Leu Ser
                    165                    170                    175
Ile Val Pro Val Arg Arg Gly Tyr Trp Gly Asn Lys Ile Gly Lys Pro
                180                    185                    190
His Thr Val Pro Cys Lys Val Thr Gly Arg Cys Gly Ser Val Leu Val
            195                    200                    205
Arg Leu Ile Pro Ala Pro Arg Gly Thr Gly Ile Val Ser Ala Pro Val
        210                    215                    220
Pro Lys Lys Leu Leu Met Met Ala Gly Ile Asp Asp Cys Tyr Thr Ser
225                    230                    235                    240
Ala Arg Gly Cys Thr Ala Thr Leu Gly Asn Phe Ala Lys Ala Thr Phe
                245                    250                    255
Asp Ala Ile Ser Lys Thr Tyr Ser Tyr Leu Thr Pro Asp Leu Trp Lys
            260                    265                    270
Glu Thr Val Phe Thr Lys Ser Pro Tyr Gln Glu Phe Thr Asp His Leu
        275                    280                    285
Val Lys Thr His Thr Arg Val Ser Val Gln Arg Thr Gln Ala Pro Ala
        290                    295                    300
Val Ala Thr Thr
305
```

```
<210> 6185
<211> 1231
<212> DNA
<213> Homo sapiens
```

```
<400> 6185
cacagcttgt tcctaggaag ggcttagcaa acgggggtgg ttgtccttct tggaagccac
60
atttgtttgc ctggtgagtg gtggagggca ctgctaggcc tgctagggct gacacggcca
120
gagtcagatg acctcatctc acatccagca ggtgaaatgc agtctttgat cccttgaaac
180
ccaccctcta ggaccaaggt cactgcagta ttggatagga cctcagggag ttagcagggg
240
gctcatggtt aagagtgtga actacagctt agacctacag ggttccctgc ccagctcctc
300
cacaaaccag ctgtgcaacc ctagacaagt gagttaatgt ccctgggcct cagtttcttc
360
ttagtaaaat gtgtgtagcc atagagggct gttatgagga ttcagtcaaa tgacacatga
420
tgtcttgggc acacctggcg tggattatgg cgcctgtagg agcaggaggg cttcctggag
480
gagggggcta gttgaacaga gtctagaaag tatagattgg gaagagcact ctgggaggca
540
ggatcaccat gtgcaaaggc tcagagaatg ccacccacta cctcctggaa atcaagggga
600
ttctgtgtgt ccaagggcat tggtggtctc taggcccccg acctgtgtct gggaggtgtc
660
aagggaagc cagatccgag gcccacactt gcatgttttc aggtgaggtc cagagatata
720
tccagagagg agtggaaggg ctcggagacc tacagcccca atactgcata tggtgtggac
780
```

ttcctggtgc ccgtgatggg ctatatctgc cgcatctgcc acaagttcta tcacagcaac
840
tcaggggcac agctctccca ctgcaagtcc ctgggccact ttgagaacct gcagaaatac
900
aaggcggcca agaaccccag ccccaccacc cgacctgtga gccgccggtg cgcaatcaac
960
gcccggaacg ctttgacagc cctgttcacc tccagcggcc gcccaccctc ccagcccaac
1020
acccaggaca aaacacccag caaggtgacg gctcgaccct cccagccccc actacctcgg
1080
cgctcaaccc gcctcaaaac ctgatagagg gacctccctg tccctggcct gcctgggtcc
1140
agatctgcta atgctttta ggagtctgcc tggaaacttt gacatggttc atgtttttac
1200
tcaaaatcca ataaaacaag gtaagtttgg c
1231

<210> 6186
<211> 133
<212> PRT
<213> Homo sapiens

<400> 6186
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
1   5   10   15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
            20   25   30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
        35   40   45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
    50   55   60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65   70   75   80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85   90   95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100   105   110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
        115   120   125
Thr Arg Leu Lys Thr
    130

<210> 6187
<211> 909
<212> DNA
<213> Homo sapiens

<400> 6187
nagtcctccc aaagtacttg tgtccgggtg gtggactgga ttcgctgcgg agccctggaa
60
gctgcctttc cttctccctg tgcttaacca gaggtgccca tgggttggac aatgaggctg
120
gtcacagcag cactgttact gggtctcatg atggtggtca ctggagacga ggatgagaac
180

5367

agcccgtgtg cccatgaggc cctcttggac gaggacaccc tcttttgcca gggccttgaa
240
gttttctacc cagagttggg gaacattggc tgcaaggttg ttcctgattg taacaactac
300
agacagaaga tcacctcctg gatggagccg atagtcaagt ccccgggggc cgtgtacggc
360
gcaacctata tcctggtgat ggtggatcca gatgccccta gcagagcaga acccagacag
420
agattctgga gacattggct ggtaacagat atcaagggcg ccgacctgaa gaaagggaag
480
attcagggcc aggagttatc agcctaccag gctccctccc accggcaca cagtggcttc
540
catcgctacc agttctttgt ctatcttcag gaaggaaaag tcatctctct ccttcccaag
600
gaaaacaaaa ctcgaggctc ttggaaaatg gacagatttc tgaaccgttt ccacctgggc
660
gaacctgaag caagcaccca gttcatgacc cagaactacc aggactcacc aaccctccag
720
gctcccagag aaagggccag cgagcccaag cacaaaaacc aggcggagat agctgcctgc
780
tagatagccg gctttgccat ccgggcatgt ggccacactg cccaccaccg acgatgtggg
840
tatggaaccc cctctggata cagaacccct tcttttccaa attaaaaaaa aaaatcatcc
900
agggcaaaa
909

<210> 6188
<211> 227
<212> PRT
<213> Homo sapiens

<400> 6188
Met Gly Trp Thr Met Arg Leu Val Thr Ala Ala Leu Leu Leu Gly Leu
1   5   10   15
Met Met Val Val Thr Gly Asp Glu Asp Glu Asn Ser Pro Cys Ala His
            20   25   30
Glu Ala Leu Leu Asp Glu Asp Thr Leu Phe Cys Gln Gly Leu Glu Val
            35   40   45
Phe Tyr Pro Glu Leu Gly Asn Ile Gly Cys Lys Val Val Pro Asp Cys
        50   55   60
Asn Asn Tyr Arg Gln Lys Ile Thr Ser Trp Met Glu Pro Ile Val Lys
65   70   75   80
Phe Pro Gly Ala Val Tyr Gly Ala Thr Tyr Ile Leu Val Met Val Asp
                85   90   95
Pro Asp Ala Pro Ser Arg Ala Glu Pro Arg Gln Arg Phe Trp Arg His
            100   105   110
Trp Leu Val Thr Asp Ile Lys Gly Ala Asp Leu Lys Lys Gly Lys Ile
            115   120   125
Gln Gly Gln Glu Leu Ser Ala Tyr Gln Ala Pro Ser Pro Pro Ala His
            130   135   140
Ser Gly Phe His Arg Tyr Gln Phe Phe Val Tyr Leu Gln Glu Gly Lys
145   150   155   160
Val Ile Ser Leu Leu Pro Lys Glu Asn Lys Thr Arg Gly Ser Trp Lys

5368

```
                    165              170             175
Met Asp Arg Phe Leu Asn Arg Phe His Leu Gly Glu Pro Glu Ala Ser
                180              185             190
Thr Gln Phe Met Thr Gln Asn Tyr Gln Asp Ser Pro Thr Leu Gln Ala
            195              200             205
Pro Arg Glu Arg Ala Ser Glu Pro Lys His Lys Asn Gln Ala Glu Ile
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Ala Ala Cys
225
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<210> 6189
<211> 2761
<212> DNA
<213> Homo sapiens

<400> 6189
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240
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420
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480
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ttcaaggccc agaatgccac tactaaagtg ggcccaaatg ccacctacaa tttctctcag
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720
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1020
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1080
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1140
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1380
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1980
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2280
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2520
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2580
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tgctgttcct tgtctactgc ttttttttccc cttgtgtgct gtcaagtttt ggtatcagaa
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2760
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5370

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2761

<210> 6190
<211> 576
<212> PRT
<213> Homo sapiens

<400> 6190
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            20   25   30
Asn Leu Glu Ser Arg Thr Ile Ile Arg Gly Lys Arg Thr Arg Lys Ile
        35   40   45
Asn Asn Leu Asn Val Glu Glu Asn Ser Ser Gly Asp Gln Arg Arg Ala
        50   55   60
Pro Leu Ala Ala Gly Thr Trp Arg Ser Ala Pro Val Pro Val Thr Thr
65   70   75   80
Gln Asn Pro Pro Gly Ala Pro Pro Asn Val Leu Trp Gln Thr Pro Leu
                85   90   95
Ala Trp Gln Asn Pro Ser Gly Trp Gln Asn Gln Thr Ala Arg Gln Thr
            100   105   110
Pro Pro Ala Arg Gln Ser Pro Pro Ala Arg Gln Thr Pro Pro Ala Trp
        115   120   125
Gln Thr Gln Asn Pro Val Ala Trp Gln Asn Pro Val Ile Trp Pro Asn
    130   135   140
Pro Val Ile Trp Gln Asn Pro Val Ile Trp Pro Asn Pro Ile Val Trp
145   150   155   160
Pro Gly Pro Val Val Trp Pro Asn Pro Leu Ala Trp Gln Asn Pro Pro
                165   170   175
Gly Trp Gln Thr Pro Pro Gly Trp Gln Thr Pro Pro Gly Trp Gln Gly
            180   185   190
Pro Pro Asp Trp Gln Gly Pro Pro Asp Trp Pro Leu Pro Pro Asp Trp
        195   200   205
Pro Leu Pro Pro Asp Trp Pro Leu Pro Thr Asp Trp Pro Leu Pro Pro
    210   215   220
Asp Trp Ile Pro Ala Asp Trp Pro Ile Pro Pro Asp Trp Gln Asn Leu
225   230   235   240
Arg Pro Ser Pro Asn Leu Arg Pro Ser Pro Asn Ser Arg Ala Ser Gln
                245   250   255
Asn Pro Gly Ala Ala Gln Pro Arg Asp Val Ala Leu Leu Gln Glu Arg
            260   265   270
Ala Asn Lys Leu Val Lys Tyr Leu Met Leu Lys Asp Tyr Thr Lys Val
        275   280   285
Pro Ile Lys Arg Ser Glu Met Leu Arg Asp Ile Ile Arg Glu Tyr Thr
    290   295   300
Asp Val Tyr Pro Glu Ile Ile Glu Arg Ala Cys Phe Val Leu Glu Lys
305   310   315   320
Lys Phe Gly Ile Gln Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
                325   330   335
Ile Leu Ile Ser Thr Pro Glu Ser Leu Ala Gly Ile Leu Gly Thr Thr
            340   345   350
Lys Asp Thr Pro Lys Leu Gly Leu Leu Leu Val Ile Leu Gly Val Ile

```
          355                    360                    365
Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp Glu Ala Leu
          370                    375                    380
Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Leu Leu Gly Asp
385                    390                    395                    400
Leu Arg Lys Leu Leu Thr Tyr Glu Phe Val Lys Gln Lys Tyr Leu Asp
                       405                    410                    415
Tyr Arg Arg Val Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
                  420                    425                    430
Gly Leu Arg Ser Tyr His Glu Thr Ser Lys Met Lys Val Leu Arg Phe
             435                    440                    445
Ile Ala Glu Val Gln Lys Arg Asp Pro Arg Asp Trp Thr Ala Gln Phe
        450                    455                    460
Met Glu Ala Ala Asp Glu Ala Leu Asp Ala Leu Asp Ala Ala Ala Ala
465                    470                    475                    480
Glu Ala Glu Ala Arg Ala Glu Ala Arg Thr Arg Met Gly Ile Gly Asp
                  485                    490                    495
Glu Ala Val Ser Gly Pro Trp Ser Trp Asp Asp Ile Glu Phe Glu Leu
             500                    505                    510
Leu Thr Trp Asp Glu Glu Gly Asp Phe Gly Asp Pro Trp Ser Arg Ile
        515                    520                    525
Pro Phe Thr Phe Trp Ala Arg Tyr His Gln Asn Ala Arg Ser Arg Phe
        530                    535                    540
Pro Gln Thr Phe Ala Gly Pro Ile Ile Gly Pro Gly Gly Thr Ala Ser
545                    550                    555                    560
Ala Asn Phe Ala Ala Asn Phe Gly Ala Ile Gly Phe Phe Trp Val Glu
                  565                    570                    575
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<210> 6191
<211> 3021
<212> DNA
<213> Homo sapiens

<400> 6191
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120
gtacttcaag aaggtgcctc tgtttacttt ggttttgcac tgccatgcga ccaggtggtg
180
caggtctccc aaatgccacc cccctccaag cttccctctt tgctctaagt cctcaggcct
240
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300
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360
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420
attgatctgg agaacattgt gtactacaag gacgacaccc actactttgt gatgacagcc
480
aagaagcagt gcctgctgcg gctgggggtg ctgcgccagg actggccaga caccaatcgg
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600
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gactttgcca cccatggcaa gctcgggaaa ctagagtttg cccaggatgc ccatgggcag
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caagagaagc atggcgcccg cctgctgctg ggactggtgg gggactgcct ggtggagccc
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840
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900
ctgtaccagc ttctgtcaca gacatcccca gaaaacatgc atcgcaatgt ggcccagtat
960
gggctggacc cagccacccg ctaccccaac ctgaacctcc gggcagtgac ccccaatcag
1020
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1080
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1920
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1980
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2040
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2100
cgcagctgct ccgccttggc ccgccacgcc ctgagagca gctttgtggg ctggggcctg
2160
ccagtccaga gccctcaagc tcttgtggcc atggagaagg aggaaaaaga gagtcccttc
2220
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5373

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tccagtgaag aggaagaaga agatgtgcct ttggactcag atgtggaaca ggccctgcag
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cgccgtgcga aggaggagga gatgaagagg ttctgcaagg cccagaccat ccaacggcga
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ctaaatgaga ttgaggctgc cttgagggag ctagaggccg agggcgtgaa gctggagctg
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2640
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3021
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<210> 6192
<211> 815
<212> PRT
<213> Homo sapiens

<400> 6192
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Cys Pro Val Pro Pro Gly Ile Asp Leu Glu Asn Ile Val Tyr Tyr Lys
            20                  25                  30
Asp Asp Thr His Tyr Phe Val Met Thr Ala Lys Lys Gln Cys Leu Leu
        35                  40                  45
Arg Leu Gly Val Leu Arg Gln Asp Trp Pro Asp Thr Asn Arg Leu Leu
    50                  55                  60
Gly Ser Ala Asn Val Val Thr Glu Ala Leu Gln Arg Phe Thr Arg Ala
65                  70                  75                  80
Ala Ala Asp Phe Ala Thr His Gly Lys Leu Gly Lys Leu Glu Phe Ala
                85                  90                  95
Gln Asp Ala His Gly Gln Pro Asp Val Ser Ala Phe Asp Phe Thr Ser
            100                 105                 110
Met Met Arg Ala Glu Ser Ser Ala Arg Val Gln Glu Lys His Gly Ala
        115                 120                 125
Arg Leu Leu Leu Gly Leu Val Gly Asp Cys Leu Val Glu Pro Phe Trp
    130                 135                 140
Pro Leu Gly Thr Gly Val Ala Arg Gly Phe Leu Ala Ala Phe Asp Ala
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5374

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145                    150                    155                    160
Ala Trp Met Val Lys Arg Trp Ala Glu Gly Ala Glu Ser Leu Glu Val
                165                    170                    175
Leu Ala Glu Arg Glu Ser Leu Tyr Gln Leu Leu Ser Gln Thr Ser Pro
            180                    185                    190
Glu Asn Met His Arg Asn Val Ala Gln Tyr Gly Leu Asp Pro Ala Thr
        195                    200                    205
Arg Tyr Pro Asn Leu Asn Leu Arg Ala Val Thr Pro Asn Gln Val Arg
    210                    215                    220
Asp Leu Tyr Asp Val Leu Ala Lys Glu Pro Val Gln Arg Asn Asn Asp
225                    230                    235                    240
Lys Thr Asp Thr Gly Met Pro Ala Thr Gly Ser Ala Gly Thr Gln Glu
                245                    250                    255
Glu Leu Leu Arg Trp Cys Gln Glu Gln Thr Ala Gly Tyr Pro Gly Val
            260                    265                    270
His Val Ser Asp Leu Ser Ser Ser Trp Ala Asp Gly Leu Ala Leu Cys
        275                    280                    285
Ala Leu Val Tyr Arg Leu Gln Pro Gly Leu Leu Glu Pro Ser Glu Leu
    290                    295                    300
Gln Gly Leu Gly Ala Leu Glu Ala Thr Ala Trp Ala Leu Lys Val Ala
305                    310                    315                    320
Glu Asn Glu Leu Gly Ile Thr Pro Val Val Ser Ala Gln Ala Val Val
                325                    330                    335
Ala Gly Ser Asp Pro Leu Gly Leu Ile Ala Tyr Leu Ser His Phe His
            340                    345                    350
Ser Ala Phe Lys Ser Met Ala His Ser Pro Gly Pro Val Ser Gln Ala
            355                    360                    365
Ser Pro Gly Thr Ser Ser Ala Val Leu Phe Leu Ser Lys Leu Gln Arg
    370                    375                    380
Thr Leu Gln Arg Ser Arg Ala Lys Asp Leu Leu Gln Glu Asn Ala Glu
385                    390                    395                    400
Asp Ala Gly Gly Lys Lys Leu Arg Leu Glu Met Glu Ala Glu Thr Pro
                405                    410                    415
Ser Thr Glu Val Pro Pro Asp Pro Glu Pro Gly Val Pro Leu Thr Pro
            420                    425                    430
Pro Ser Gln His Gln Glu Ala Gly Ala Gly Asp Leu Cys Ala Leu Cys
            435                    440                    445
Gly Glu His Leu Tyr Val Leu Glu Arg Leu Cys Val Asn Gly His Phe
    450                    455                    460
Phe His Arg Ser Cys Phe Arg Cys His Thr Cys Glu Ala Thr Leu Trp
465                    470                    475          ·         480
Pro Gly Gly Tyr Glu Gln His Pro Gly Asp Gly His Phe Tyr Cys Leu
    ·               485                    490                    495
Gln His Leu Pro Gln Thr Asp His Lys Ala Glu Gly Ser Asp Arg Gly
                500                    505                    510
Pro Glu Ser Pro Glu Leu Pro Thr Pro Ser Glu Asn Ser Met Pro Pro
            515                    520                    525
Gly Leu Ser Thr Pro Thr Ala Ser Gln Glu Gly Ala Gly Pro Val Pro
    530                    535                    540
Asp Pro Ser Gln Pro Thr Arg Arg Gln Ile Arg Leu Ser Ser Pro Glu
545                    550                    555                    560
Arg Gln Arg Leu Ser Ser Leu Asn Leu Thr Pro Asp Pro Glu Met Glu
                565                    570                    575
Pro Pro Pro Lys Pro Pro Arg Ser Cys Ser Ala Leu Ala Arg His Ala
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5375

```
                    580                    585                    590
        Leu Glu Ser Ser Phe Val Gly Trp Gly Leu Pro Val Gln Ser Pro Gln
                595                    600                    605
        Ala Leu Val Ala Met Glu Lys Glu Glu Lys Glu Ser Pro Phe Ser Ser
                610                    615                    620
        Glu Glu Glu Glu Glu Asp Val Pro Leu Asp Ser Asp Val Glu Gln Ala
        625                    630                    635                    640
        Leu Gln Thr Phe Ala Lys Thr Ser Gly Thr Met Asn Asn Tyr Pro Thr
                        645                    650                    655
        Trp Arg Arg Thr Leu Leu Arg Arg Ala Lys Glu Glu Glu Met Lys Arg
                    660                    665                    670
        Phe Cys Lys Ala Gln Thr Ile Gln Arg Arg Leu Asn Glu Ile Glu Ala
                675                    680                    685
        Ala Leu Arg Glu Leu Glu Ala Glu Gly Val Lys Leu Glu Leu Ala Leu
                690                    695                    700
        Arg Arg Gln Ser Ser Ser Pro Glu Gln Gln Lys Lys Leu Trp Val Gly
        705                    710                    715                    720
        Gln Leu Leu Gln Leu Val Asp Lys Lys Asn Ser Leu Val Ala Glu Glu
                        725                    730                    735
        Ala Glu Leu Met Ile Thr Val Gln Glu Leu Asn Leu Glu Glu Lys Gln
                    740                    745                    750
        Trp Gln Leu Asp Gln Glu Leu Arg Gly Tyr Met Asn Arg Glu Glu Asn
                    755                    760                    765
        Leu Lys Thr Ala Ala Asp Arg Gln Ala Glu Asp Gln Val Leu Arg Lys
                770                    775                    780
        Leu Val Asp Leu Val Asn Gln Arg Asp Ala Leu Ile Arg Phe Gln Glu
        785                    790                    795                    800
        Glu Arg Arg Leu Ser Glu Leu Ala Leu Gly Thr Gly Ala Gln Gly
                        805                    810                    815
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<210> 6193
<211> 2893
<212> DNA
<213> Homo sapiens

<400> 6193
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120
cattcatttt tttagaacat ccttcaaaga gttcatgcat cttactgagg acacctgacc
180
ttttgaagct tcataattca catctagatg tcaccggtct ttcccatgtt aacagttctg
240
accatgtttt attatatatg ccttcggcgc cgagccagga cagctacaag aggagaaatg
300
atgaacaccc atagagctat agaatcaaac agccagactt cccctctcaa tgcagaggta
360
gtccagtatg ccaaagaagt agtggatttc agttcccatt atggaagtga gaatagtatg
420
tcctatacta tgtggaattt ggctggtgta ccaaatgtat tcccaagttc tggtgacttt
480
actcagacag ctgtgtttcg aacttatggg acatggtggg atcagtgtcc tagtgcttcc
540
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5376

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ttgccattca agaggacgcc acctaatttt cagagccagg actatgtgga acttactttt
600
gaacaacagg tgtatcctac agctgtacat gttctagaaa cctatcatcc cggagcagtc
660
attagaattc tcgcttgttc tgcaaatcct tattccccaa atccaccagc tgaagtaaga
720
tgggagattc tttggtcaga gagacctacg aaggtgaatg cttcccaagc tcgccagttt
780
aaaccttgta ttaagcagat aaatttcccc acaaatctta tacgactgga agtaaatagt
840
tctcttctgg aatattacac tgaattagat gcagttgtgc tacatggtgt gaaggacaag
900
ccagtgcttt ctctcaagac ttcacttatt gacatgaatg atatagaaga tgatgcctat
960
gcagaaaagg atggttgtgg aatggacagt cttaacaaaa agtttagcag tgctgtcctc
1020
ggggaagggc caaataatgg gtattttgat aaactacctt atgagcttat tcagctgatt
1080
ctgaatcatc ttacactacc agacctgtgt agattagcac agacttgcaa actactgagc
1140
cagcattgct gtgatcctct gcaatacatc cacctcaatc tgcaaccata ctgggcaaaa
1200
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1320
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1380
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1440
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1500
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1560
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1620
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1680
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1920
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1980
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2040
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2160
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                                    5377

```
atggtaagaa ttaagacatt tgtagatttt aaagaaaaat atgaaattgt ccattaaatc
2220
aagtaaaaat gtgcacaaat gttttcataa aatactgcaa gcacttctct tcaagaatat
2280
gagtggatat tattttttacc ttatgttaat cagtgatatg ctttagtcaa taatatgatt
2340
gataaaagaa taacatggaa tcatgctaac ttattttcaa aggaacactg agcaataaag
2400
tatcgtggca tttatgcaaa aaaaaaagtt aatttttac accttcatgt aaggatgtct
2460
tattaagcct gtgacctggc aagtgttttg tttggtatgt acaaaatggt cagagctagt
2520
tggagaatga gacatgcttt tccagctgtt tggttattc tctggattaa ctgttcaact
2580
ggaaaatttt tagtttttct agccaggtgt ggtggcacac acttgtagtc ctagcgacac
2640
gggaggtgga ggcaggagga ttacttgaga tgggattttg agactctagt gtacttatga
2700
ttgcacctgt gagcagccac tgcactccaa cctgggcaat atagcgagtc cctttctctt
2760
aaaaaaaatt gtagtgtttc cacttttctt ctgatatttt tgtctatttc actactggat
2820
aatgccaata taaaaatttg ggtataatca agaataagag gtaaactact aaataaaaaa
2880
agctttccaa ctg
2893
```

```
<210> 6194
<211> 621
<212> PRT
<213> Homo sapiens
```

```
<400> 6194
Met Ser Pro Val Phe Pro Met Leu Thr Val Leu Thr Met Phe Tyr Tyr
1               5                   10                  15
Ile Cys Leu Arg Arg Arg Ala Arg Thr Ala Thr Arg Gly Glu Met Met
            20                  25                  30
Asn Thr His Arg Ala Ile Glu Ser Asn Ser Gln Thr Ser Pro Leu Asn
        35                  40                  45
Ala Glu Val Val Gln Tyr Ala Lys Glu Val Val Asp Phe Ser Ser His
    50                  55                  60
Tyr Gly Ser Glu Asn Ser Met Ser Tyr Thr Met Trp Asn Leu Ala Gly
65                  70                  75                  80
Val Pro Asn Val Phe Pro Ser Ser Gly Asp Phe Thr Gln Thr Ala Val
                85                  90                  95
Phe Arg Thr Tyr Gly Thr Trp Trp Asp Gln Cys Pro Ser Ala Ser Leu
            100                 105                 110
Pro Phe Lys Arg Thr Pro Pro Asn Phe Gln Ser Gln Asp Tyr Val Glu
            115                 120                 125
Leu Thr Phe Glu Gln Gln Val Tyr Pro Thr Ala Val His Val Leu Glu
        130                 135                 140
Thr Tyr His Pro Gly Ala Val Ile Arg Ile Leu Ala Cys Ser Ala Asn
145                 150                 155                 160
Pro Tyr Ser Pro Asn Pro Pro Ala Glu Val Arg Trp Glu Ile Leu Trp
```

```
                      165                170                175
Ser Glu Arg Pro Thr Lys Val Asn Ala Ser Gln Ala Arg Gln Phe Lys
            180                185                190
Pro Cys Ile Lys Gln Ile Asn Phe Pro Thr Asn Leu Ile Arg Leu Glu
        195                200                205
Val Asn Ser Ser Leu Leu Glu Tyr Tyr Thr Glu Leu Asp Ala Val Val
    210                215                220
Leu His Gly Val Lys Asp Lys Pro Val Leu Ser Leu Lys Thr Ser Leu
225                230                235                240
Ile Asp Met Asn Asp Ile Glu Asp Asp Ala Tyr Ala Glu Lys Asp Gly
                245                250                255
Cys Gly Met Asp Ser Leu Asn Lys Lys Phe Ser Ser Ala Val Leu Gly
            260                265                270
Glu Gly Pro Asn Asn Gly Tyr Phe Asp Lys Leu Pro Tyr Glu Leu Ile
        275                280                285
Gln Leu Ile Leu Asn His Leu Thr Leu Pro Asp Leu Cys Arg Leu Ala
    290                295                300
Gln Thr Cys Lys Leu Leu Ser Gln His Cys Cys Asp Pro Leu Gln Tyr
305                310                315                320
Ile His Leu Asn Leu Gln Pro Tyr Trp Ala Lys Leu Asp Asp Thr Ser
                325                330                335
Leu Glu Phe Leu Gln Ser Arg Cys Thr Leu Val Gln Trp Leu Asn Leu
            340                345                350
Ser Trp Thr Gly Asn Arg Gly Phe Ile Ser Val Ala Gly Phe Ser Arg
        355                360                365
Phe Leu Lys Val Cys Gly Ser Glu Leu Val Arg Leu Glu Leu Ser Cys
    370                375                380
Ser His Phe Leu Asn Glu Thr Cys Leu Glu Val Ile Ser Glu Met Cys
385                390                395                400
Pro Asn Leu Gln Ala Leu Asn Leu Ser Ser Cys Asp Lys Leu Pro Pro
                405                410                415
Gln Ala Phe Asn His Ile Ala Lys Leu Cys Ser Leu Lys Arg Leu Val
            420                425                430
Leu Tyr Arg Thr Lys Val Glu Gln Thr Ala Leu Leu Ser Ile Leu Asn
        435                440                445
Phe Cys Ser Glu Leu Gln His Leu Ser Leu Gly Ser Cys Val Met Ile
    450                455                460
Glu Asp Tyr Asp Val Ile Ala Ser Met Ile Gly Ala Lys Cys Lys Lys
465                470                475                480
Leu Arg Thr Leu Asp Leu Trp Arg Cys Lys Asn Ile Thr Glu Asn Gly
            485                490                495
Ile Ala Glu Leu Ala Ser Gly Cys Pro Leu Leu Glu Glu Leu Asp Leu
        500                505                510
Gly Trp Cys Pro Thr Leu Gln Ser Ser Thr Gly Cys Phe Thr Arg Leu
    515                520                525
Ala His Gln Leu Pro Asn Leu Gln Lys Leu Phe Leu Thr Ala Asn Arg
    530                535                540
Ser Val Cys Asp Thr Asp Ile Asp Glu Leu Ala Cys Asn Cys Thr Arg
545                550                555                560
Leu Gln Gln Leu Asp Ile Leu Gly Thr Arg Met Val Ser Pro Ala Ser
            565                570                575
Leu Arg Lys Leu Leu Glu Ser Cys Lys Asp Leu Ser Leu Leu Asp Val
        580                585                590
Ser Phe Cys Ser Gln Ile Asp Asn Arg Ala Val Leu Glu Leu Asn Ala
```

```
              595                   600                   605
Ser Phe Pro Lys Val Phe Ile Lys Lys Ser Phe Thr Gln
        610                   615                   620
```

```
<210> 6195
<211> 518
<212> DNA
<213> Homo sapiens
```

```
<400> 6195
ggatcccaag agatattttc tgagctgaac tatgtggtca cagaaggcca gctcccagca
60
gcacgggact atgagggttc gccctgttct gtgtagcccc agctggttcc ctggggaaaa
120
gtttccactt ctgctgtcaa gaaccacaag ggtcaagccc catccctaca aataccaagt
180
acatccaaat tcttcactgg cacagaaatg gtgttacatc cactgggaac aaacctgcat
240
ccccacccca aggcatgtga caacagggac tgctaatgag ctttgtccgg gtaactcatt
300
cacgccatca tcttgctctt tccatagtca cttattaagc acaaactatg ccaaaaacta
360
tgtccagcac cgcacaggat ggtaaaatgc cctgaggggc cacccccatc tgactcccgt
420
tgagcggagt gggcagccct gcctgggagc tccagcctcc tgcacccacg tgccccccttg
480
ttatctctgc ctggatgcct cacaggcatc tcacgcgt
518
```

```
<210> 6196
<211> 117
<212> PRT
<213> Homo sapiens
```

```
<400> 6196
Met Trp Ser Gln Lys Ala Ser Ser Gln Gln His Gly Thr Met Arg Val
1               5                   10                  15
Arg Pro Val Leu Cys Ser Pro Ser Trp Phe Pro Gly Glu Lys Phe Pro
            20                  25                  30
Leu Leu Leu Ser Arg Thr Thr Arg Val Lys Pro His Pro Tyr Lys Tyr
        35                  40                  45
Gln Val His Pro Asn Ser Ser Leu Ala Gln Lys Trp Cys Tyr Ile His
    50                  55                  60
Trp Glu Gln Thr Cys Ile Pro Thr Pro Arg His Val Thr Thr Gly Thr
65                  70                  75                  80
Ala Asn Glu Leu Cys Pro Gly Asn Ser Phe Thr Pro Ser Ser Cys Ser
                85                  90                  95
Phe His Ser His Leu Leu Ser Thr Asn Tyr Ala Lys Asn Tyr Val Gln
                100                 105                 110
His Arg Thr Gly Trp
            115
```

```
<210> 6197
<211> 2841
```

<212> DNA
<213> Homo sapiens

<400> 6197
nagcattctt ccatctgtag atgtttcagc tgctgtacaa gggagtccca tttcaggtgt
60
ggggctgggc atggtcactc ctgctggatg tctggaaggt gaaaaccaag gacctaggga
120
aataccaggt acagcctttc cccgctcatc cagagcagga caaacaggcc aggtggtatc
180
aggagcccag gtctccagct ggagggaatg tcaaccctgc agtgggagca ggggcccatc
240
acgcatccta ggcacagatg ctaatgcagg cactgcaggt aagctgggct tggtatcctt
300
ccctggcttc agaaagaagc caacaaggag cgttttgcag aatgaaacct ttgtttccag
360
aagcactgct gactgtaagt ggttgccgtt tgtggcagtg agcattttgt ccattctgag
420
gttggattgg tttctccttt tggccttgcc ctgccctaca gaccataaag gagaacagca
480
agaagccccc agcaaacatc cacagatggc cctggacatc agccacattc tgaggaacat
540
gtcatgttct gggagggcta aggcatcaag taaggcctgt ggggctggag gatcacaggg
600
caggtggggc aatccagagc catggggct tcccatggga attgggaggt cccaaggcag
660
agtcagaggt tccacaggag gagtcagaga gtcaccaagg gctctcctgg cccagggagc
720
agtcaacacc atggactgaa cacccactgg gctccaaccc ttgggccagg ctggggcatg
780
tggggccagg aggcagctca gagtgggagg cagagagaga agtgtgttca gagggcaccc
840
atatctggat gtaatgtggt cctgagactc tggctgggaa gtgcttccag ggtttcatat
900
gtgttatgca gctacttcct ctccccaacc ttaccgtgca ggaatcccag tgaatatgtt
960
gccaccatct tggagctcag tgccctcata gtgtaacagc accagcagat ctgcctgtgc
1020
acagacttcc tgtactacct cactcctgag gggagatgct tctgcagggc ctgcgacctg
1080
gtgcacaact ttnnagacac catcatcctg gagcggcact gcaccctcac tagccagggt
1140
gttgatgact tcctcaatgc caaggccacg ttcaagattt tcgacttcag tgatgcgttt
1200
gtgctgagca aggtgggctt ctccgggatt ttagttcagg aggtagaatg cagcttgaga
1260
tcaagtgtct gatcaaataa cttgaacttg atctggagag ctctggggag ccatagaagt
1320
tgttggataa aggagggaca gtcgtatatg ttttagagat gactgtggaa ggctgcctgg
1380
aaggagtgaa caagagccag gagaccaggg agggagcttg tggggcaggt ctggagatga
1440
caagggaggg atcctgcttt gatgaaaggt cttcagggaa tgtctcaggt tacactcagg
1500

tgtcctcaga gctagtgtgt tcaggggtct tgcctccagg atgaaaatga gaaggagttg
1560
tcagacaaga acatataaat gaaggctggc atcttcgtga gtgccaatcg ttgtcctggt
1620
gtggactact gtgggaatag gggtctctcc atccagggac atggtggatg gaccctacat
1680
cactccattc tgcccttcct ttccctccca ttctgagggc ctcagtgcaa gggcgctgtc
1740
caacctctgg tgctgaagca gccgagagac ccaagcctgc cactcaggat atgacagcac
1800
agccagtggc ctctactgga tcctgtacaa cctcagaaga cacctagaca ctgggagtgc
1860
tgccaccacg tggtgcaaga gttctgaggg accgcaattc tgaagacatt gaatgctgct
1920
tcctgctccc tccatggacc tgcacagaat tgtcccatgt ttctgtttgt ttgggcacca
1980
ctgaggaagg aagcatgaag gacgcagagg tcaggccatt ctattgccct cctgctgctg
2040
ggtctttaat cctgagatgg cttcaggggc tggtccttct ccatggcccc ctccacatat
2100
ctcagccatt ttgcaaaccc tggtcagaat gaaacattcc ttgggaactc gggccatgag
2160
aagcatcctt cctgaccacc tgactgcgga aacatcctta tcgcatcctc ccgggcgaag
2220
gcccaacagc ctgactgcag gaacatcctt gccatatcct gccgggcagc aagctctacc
2280
gcccagaccc ctccttccca gtcccatgat cgccccagcc tgtgagcggc agttggtgat
2340
ggcactaagc tgatttcctc ctctgcaggg ttttgctagt aataaaggtg ttgctgttga
2400
agccgtcaac tgtctttcta tgtctttctt taacccttgc cttgccttca aaatctaaca
2460
atagctctac ctctccattt taccaaggag gatatgagac tcaaggagag caagagactt
2520
acccagaatt acacagccag tgagtcacag aacttgaact tgagctcagt tcagctgaat
2580
ccagaactca tgtcttcctg agagtccagg gaaggaaagg tggaactgca gccagtgggt
2640
cccacaggct tgtcctagga gaccacatgc agactcctgg gaattgtgtc ctcttgggca
2700
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2760
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2820
aagcacagag gcatatagaa a
2841

<210> 6198
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6198
Met Gly Ala Ser His Gly Asn Trp Glu Val Pro Arg Gln Ser Gln Arg

```
 1                 5                  10                 15
Phe His Arg Arg Ser Gln Arg Val Thr Lys Gly Ser Pro Gly Pro Gly
            20                  25                 30
Ser Ser Gln His His Gly Leu Asn Thr His Trp Ala Pro Thr Leu Gly
            35                  40                 45
Pro Gly Trp Gly Met Trp Gly Gln Glu Ala Ala Gln Ser Gly Arg Gln
        50                  55                 60
Arg Glu Lys Cys Val Gln Arg Ala Pro Ile Ser Gly Cys Asn Val Val
65                  70                  75                 80
Leu Arg Leu Trp Leu Gly Ser Ala Ser Arg Val Ser Tyr Val Leu Cys
                85                  90                 95
Ser Tyr Phe Leu Ser Pro Thr Leu Pro Cys Arg Asn Pro Ser Glu Tyr
            100                 105                110
Val Ala Thr Ile Leu Glu Leu Ser Ala Leu Ile Val
            115                 120
```

<210> 6199
<211> 1777
<212> DNA
<213> Homo sapiens

<400> 6199

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tgccccatcc caccttacaa cactctggcc cctctgcttg gtcccctttt tccccaggca
120
ggaggcaatc ccaggggcct gcctgataga ggcatttcct gtccctgtct cctcctgcat
180
ctcctttatc ctgcactgcc accctctatt ccccattctg tgttggactt tgaaggcccc
240
aagcccagcc aaagcactga gttccccctt aagacacctc cacaccctcc ccacaagcaa
300
agcacaaatt ttggggtcca tgtagcatgg gccacgtagg aggctcctga cttgccaggg
360
gcccagcctc agcataccca ccgaggcagc tgccagcctg ggctgagggt gggcatgagg
420
caggagtcag cacttggacc tagggatgtg aggtttctg tgccccaagt ttgtgggaag
480
gtgggcacta ctgctgggcc cacagacaca gccagctggc aaaagggagg tctagcccag
540
cagagagatg aggacatttt gcttctcctt catgcccaca gcatgagctg agcttctgct
600
ttgctggaaa tgaaataaac ttggtatgaa ttgtgccaag gcctcccccag ttgtcatcct
660
gcctcttgtt gccctccctg tccttgcccc ccacccccaca cccatgcccc tgtttcctta
720
cagatttttga tattgttcta atgtgtaata gaaccagccg agtccccttt tatcagaagg
780
gtctgaaaag cagcagcaca gagtaggtga acacaggcct gcaagtgcga ccacctcaga
840
cccagtacgt gtgcccacag tggacacact cacacctcca acacacccac gcgcaggcat
900
gtgtacacgc atgtacacac gcatgcatgc acagccagat ggccactcag cacagatgtg
960
```

```
gcagagggaa tggtctgatc ctgctgaaag ccattaagga gaaacgaatt tcccagtgcc
1020
cgggctgcaa gagagcctta tagggggccct gtttcctggg catgcgcttc ctctgccagc
1080
caacccccac ttgcccaagt cactggtgca ataactttc tgccttcctc agagcagaga
1140
aattgggaat tgtgttaggt gggtgtgggc agctctgctg agccaagcag acacggatgt
1200
cccctcttct gggaggaggg tagtgctccc aggcctcagg agtccagaca gagaccccca
1260
aagcctgact gccaacagaa accctctcct agtgaggggc aggtgggtgt gcccnncagg
1320
tccccacacc cacagggagg cttcacacac tgcccagtac cggggatgcc aggaggcagg
1380
cccctctgct gctgccactg ctgccaacac tgcccagctt gtgaggccag gaggagcccc
1440
tgtcccactc ggtgctgctg ctcttctgac ccctgctgtg aggaatggga ttcttggtcg
1500
aaaaaattgg ttttcctttt ttgtataaat gaaaagaatc caggagaagc tgccaccctc
1560
ccctcccagc gtgatgcgct accttgcttc ggcgtcttgt cgccctttcc gcctttggtc
1620
cagggacagc ccagcagatc ctcctggttc tgacctgggg ggtgtttgca tcacccccctt
1680
ttacttgtat taaaaaaaaa tgatgggttg aaaatgtact gaggattaaa aatgtacttt
1740
tttataaata aagtgtttaa aacaaaaaaa aaaaaaa
1777
```

<210> 6200
<211> 164
<212> PRT
<213> Homo sapiens

<400> 6200
```
Val Gly Val Gly Ser Ser Ala Glu Pro Ser Arg His Gly Cys Pro Leu
1               5                   10                  15
Phe Trp Glu Glu Gly Ser Ala Pro Arg Pro Gln Glu Ser Arg Gln Arg
            20                  25                  30
Pro Pro Lys Pro Asp Cys Gln Gln Lys Pro Ser Pro Ser Glu Gly Gln
        35                  40                  45
Val Gly Val Pro Xaa Arg Ser Pro His Pro Gln Gly Gly Phe Thr His
    50                  55                  60
Cys Pro Val Pro Gly Met Pro Gly Gly Arg Pro Leu Cys Cys Cys His
65                  70                  75                  80
Cys Cys Gln His Cys Pro Ala Cys Glu Ala Arg Arg Ser Pro Cys Pro
                85                  90                  95
Thr Arg Cys Cys Cys Ser Ser Asp Pro Cys Cys Glu Glu Trp Asp Ser
            100                 105                 110
Trp Ser Lys Lys Leu Val Phe Leu Phe Cys Ile Asn Glu Lys Asn Pro
        115                 120                 125
Gly Glu Ala Ala Thr Leu Pro Ser Gln Arg Asp Ala Leu Pro Cys Phe
    130                 135                 140
Gly Val Leu Ser Pro Phe Pro Pro Leu Val Gln Gly Gln Pro Ser Arg
```

5384

```
145                  150                  155                  160
Ser Ser Trp Phe


<210> 6201
<211> 604
<212> DNA
<213> Homo sapiens


<400> 6201
acgcgtgggc atgtgcacgt gtgtgcctgt gcatgcgtga atatgcgtgt gtgtgcgtgc
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tgtgctgagg acagcgtgag ttttcacaga agcaggtaaa aagttccaca ggaacagaga
120
ccaggacaag accagccctg atgggagaag ccagaggacc cagaggaact tccaggaggc
180
ccttagctcc ctcagacaga atgcgggatc gcaatgccca gcaaagggca attcaaggac
240
agtggacgct ggggagagga gcagagtggg cagctctcag gagggcagga ctgcgaggct
300
gcagggagga gttcggtggg aagggacagc ctcagagcct aagctgcgcc tcctgggaaa
360
ggggtatgac tggcaggcac acaaatgtct ctcaaggaag gtgggcctgg ggccacagag
420
ctcccagagg agggagtgga gagggagagc ccgcagagga gagaccaggc agggctggcg
480
atcacgcagg tgcacagggt gaacgtcagg actgaaacgg aagacaatgt ccccatgcaa
540
gactggctga aacgaactca cacagaattt ttaagaggct cctgtgttgg gtgaaaaccg
600
gccg
604


<210> 6202
<211> 124
<212> PRT
<213> Homo sapiens


<400> 6202
Met Gly Glu Ala Arg Gly Pro Arg Gly Thr Ser Arg Arg Pro Leu Ala
 1               5                  10                  15
Pro Ser Asp Arg Met Arg Asp Arg Asn Ala Gln Gln Arg Ala Ile Gln
                20                  25                  30
Gly Gln Trp Thr Leu Gly Arg Gly Ala Glu Trp Ala Ala Leu Arg Arg
            35                  40                  45
Ala Gly Leu Arg Gly Cys Arg Glu Glu Phe Gly Gly Lys Gly Gln Pro
        50                  ·55                  60
Gln Ser Leu Ser Cys Ala Ser Trp Glu Arg Gly Met Thr Gly Arg His
65                  70                  75                  80
Thr Asn Val Ser Gln Gly Arg Trp Ala Trp Gly His Arg Ala Pro Arg
                85                  90                  95
Gly Gly Ser Gly Glu Gly Glu Pro Ala Glu Glu Arg Pro Gly Arg Ala
            100                 105                 110
Gly Asp His Ala Gly Ala Gln Gly Glu Arg Gln Asp
```

5385

                  115   120

<210> 6203
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 6203
nnaccgttgc ggccgcaggg gtctgggcag ggctgggcag tgctgccgga gcaaaagcgg
60
tagcgggagc ccggccggag ctgggtctgg agacgccgtg gcagcctgaa cggagtgtgc
120
gacggattgg gaggtttgtc tacagatttt gagcgttcga agttgacccc tgactaagta
180
tactttgctg ctccctcagc ctttgaaaaa atgtctgtca catatgatga ttccgttgga
240
gtagaagtgt ccagcgacag cttctgggag gtcgggaact acaagcggac tgtgaagcgg
300
atcgacgatg gccaccgcct gtgcagcgac ctcatgaact gcctgcatga gcgggcgcgc
360
atcgagaagg cgtatgcgca gcagctcact gagtgggccc ggcgctggag gcagctcgtg
420
gagaaagggc cccagtacgg gaccgtggag aaggcctgga tggccttcat gtccgaggca
480
gagagggtga gcgagctgca cctcgaggtg aaggcctcac tgatgaacga tgacttcgag
540
aagatcaaga actggcagaa ggaagccttt cacaagcaga tgatgggcgg cttcaaggag
600
accaaggaag ctgaggacgg ctttcggaag gcacagaagc cctgggccaa gaagctgaaa
660
gaggtagaag cagcaaagaa agcccaccat gcagcgtgca aagaggagaa gctggctatc
720
tcacgagaag ccaacagcaa ggcagaccca tccctcaacc ctgaacagct caagaaattg
780
caagacaaaa tagaaaagtg caagcaagat gttcttaaga ccaaagagaa gtatgagaag
840
tccctgaagg aactcgacca gggcacaccc cagtacatgg agaacatgga gcaggtgttt
900
gagcagtgcc agcagttcga ggagaaacgc cttcgcttct tccgggaggt tctgctggag
960
gttcagaagc acctagacct gtccaatgtg gctggctaca aagccattta ccatgacctg
1020
gagcagagca tcagagcagc tgatgcagtg gaggacctga ggtggttccg agccaatcac
1080
gggccgggca tggccatgaa ctggccgcag tttgaggagt ggtccgcaga cctgaatcga
1140
accctcagcc ggagagagaa gaagaaggcc actgacggcg tcaccctgac gggcatcaac
1200
cagacaggcg accagtctct gccgagtaag cccagcagca cccttaatgt cccgagcaac
1260
cccgcccagt ctgcgcagtc acagtccagc tacaaccoct tcgaggatga ggacgacacg
1320
ggcagcaccg tcagtgagaa ggacgacact aaggccaaaa atgtgagcag ctacgagaag
1380

                      5386

```
acccagagct atcccaccga ctggtcagac gatgagtcta acaacccctt ctcctccacg
1440
gatgccaatg gggactcgaa tccattcgac gacgacgcca cctcgggggac ggaagtgcga
1500
gtccgggccc tgtatgacta tgaggggcag gagcatgatg agctgagctt caaggctggg
1560
gatgagctga ccaagatgga ggacgaggat gagcagggct ggtgcaaggg acgcttggac
1620
aacgggcaag ttggcctata cccggcaaat tatgtggagg cgatccagtg atgagtcggg
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1800
gaaggcagat gagctggtca tttcgcctgg gactcggcac ctttccgagt gcagctggag
1860
ggatctgagc gcaggaagac gcagaacaac agaaatagcc gcccctcccc gcccactgtg
1920
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1980
gtgggttaca ctgatcttgt tccactgatt actctctctg acgagtccat cacctgcaac
2040
ttaaatgaac aagcttacat cccatttttga gtgaagattt tgaggttttt aatttaaagg
2100
ctgtgtacag ttatactttt ttatacacct gttcatttct acttaaatta tggcacagat
2160
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2220
gccgtgtgta ggcttagcct caggtggcag atgtttgagg aaaggaatta tgccaggaag
2280
gtgggaccgg gttatggtcg ggtttctatt gggaatgctc tttgtgcttt tgggcatctg
2340
aatggaagct ttacatagaa ccttaggtag aactccccca aatcgccata tttaaaaatt
2400
attttcactc tattcttgct taaaactgta ctcttttgca aattaacaat tttatcactg
2460
attcagagtt aaaaagaaga ctaacttttc aagcaaatgc atctgtaaag atgctttaga
2520
ttagactgtc atgtctcagt gtctatctgt atatattatt tgatattcag agaatctaaa
2580
gcactcgtct actgttttaa tgagatttaa cagcttttaa cagtgagttt cgtttgtaaa
2640
ctgcttgaag tctgtggcat tcaggcacac atctggctgg ccggctgggt ctcctcccgg
2700
gctcagtggg cctggggcct ctctgacgtg gtgcctgctg gagggaggct cgtcgtcacc
2760
agctgactgc tggtccggct tctgaccggc ctttgtcctg gctccgtagc agaacactgt
2820
aaaagtgccc gcgtctttgc agtagttgca gatttcagtc gtcgtgttac ttgtgcacaa
2880
acagaagctg ggtcttaccc gcagcacgag tgtctcgggc tgcccggagt cgcccgggag
2940
caggtgctgc agccagagtt acgcgggggc cacgcgggcc ggcgggggtg gggggaacgt
3000
```

5387

```
gggggaacct gtgtttcacg tgactcagca gtgcccgccg ccgtcaccag ctatgcattc
3060
actccgtttc cagtgagcag atgtcttgct tggaaagtgg acctgtgtct gtgtctgtcc
3120
tgagaactta ccagcagaaa tcctcatttc tgtgctacgg atttaccaaa aattgtcaag
3180
tctttttcag tttaacagtt cctttacatg tgtagtattt gaggaaaaaa atcaataaac
3240
agttgatctc gtgcatatgg aagtcccttc gccatcatct gtcttcatgc ccacttcact
3300
tggcggggggt ggcctccctg gggcttacta gctttggagc tgggcaagat ccagggcaca
3360
ggaccctgc ccaaaaggcc acggcccact gcccctgcca aactggaggt tggggatttg
3420
aggcacctga gccccttggg gttcccttct ccccgagacc tg
3462
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```
<210> 6204
<211> 486
<212> PRT
<213> Homo sapiens
```

```
<400> 6204
Met Ser Val Thr Tyr Asp Asp Ser Val Gly Val Glu Val Ser Ser Asp
1               5                   10                  15
Ser Phe Trp Glu Val Gly Asn Tyr Lys Arg Thr Val Lys Arg Ile Asp
            20                  25                  30
Asp Gly His Arg Leu Cys Ser Asp Leu Met Asn Cys Leu His Glu Arg
            35                  40                  45
Ala Arg Ile Glu Lys Ala Tyr Ala Gln Gln Leu Thr Glu Trp Ala Arg
        50                  55                  60
Arg Trp Arg Gln Leu Val Glu Lys Gly Pro Gln Tyr Gly Thr Val Glu
65                  70                  75                  80
Lys Ala Trp Met Ala Phe Met Ser Glu Ala Glu Arg Val Ser Glu Leu
                85                  90                  95
His Leu Glu Val Lys Ala Ser Leu Met Asn Asp Asp Phe Glu Lys Ile
            100                 105                 110
Lys Asn Trp Gln Lys Glu Ala Phe His Lys Gln Met Met Gly Gly Phe
            115                 120                 125
Lys Glu Thr Lys Glu Ala Glu Asp Gly Phe Arg Lys Ala Gln Lys Pro
        130                 135                 140
Trp Ala Lys Lys Leu Lys Glu Val Glu Ala Ala Lys Lys Ala His His
145                 150                 155                 160
Ala Ala Cys Lys Glu Glu Lys Leu Ala Ile Ser Arg Glu Ala Asn Ser
                165                 170                 175
Lys Ala Asp Pro Ser Leu Asn Pro Glu Gln Leu Lys Lys Leu Gln Asp
            180                 185                 190
Lys Ile Glu Lys Cys Lys Gln Asp Val Leu Lys Thr Lys Glu Lys Tyr
            195                 200                 205
Glu Lys Ser Leu Lys Glu Leu Asp Gln Gly Thr Pro Gln Tyr Met Glu
        210                 215                 220
Asn Met Glu Gln Val Phe Glu Gln Cys Gln Gln Phe Glu Glu Lys Arg
225                 230                 235                 240
Leu Arg Phe Phe Arg Glu Val Leu Leu Glu Val Gln Lys His Leu Asp
```

5388

```
                      245                 250                 255
Leu Ser Asn Val Ala Gly Tyr Lys Ala Ile Tyr His Asp Leu Glu Gln
                  260                 265                 270
Ser Ile Arg Ala Ala Asp Ala Val Glu Asp Leu Arg Trp Phe Arg Ala
              275                 280                 285
Asn His Gly Pro Gly Met Ala Met Asn Trp Pro Gln Phe Glu Glu Trp
          290                 295                 300
Ser Ala Asp Leu Asn Arg Thr Leu Ser Arg Arg Glu Lys Lys Lys Ala
305                 310                 315                 320
Thr Asp Gly Val Thr Leu Thr Gly Ile Asn Gln Thr Gly Asp Gln Ser
                  325                 330                 335
Leu Pro Ser Lys Pro Ser Ser Thr Leu Asn Val Pro Ser Asn Pro Ala
              340                 345                 350
Gln Ser Ala Gln Ser Gln Ser Ser Tyr Asn Pro Phe Glu Asp Glu Asp
          355                 360                 365
Asp Thr Gly Ser Thr Val Ser Glu Lys Asp Asp Thr Lys Ala Lys Asn
      370                 375                 380
Val Ser Ser Tyr Glu Lys Thr Gln Ser Tyr Pro Thr Asp Trp Ser Asp
385                 390                 395                 400
Asp Glu Ser Asn Asn Pro Phe Ser Ser Thr Asp Ala Asn Gly Asp Ser
                  405                 410                 415
Asn Pro Phe Asp Asp Asp Ala Thr Ser Gly Thr Glu Val Arg Val Arg
              420                 425                 430
Ala Leu Tyr Asp Tyr Glu Gly Gln Glu His Asp Glu Leu Ser Phe Lys
          435                 440                 445
Ala Gly Asp Glu Leu Thr Lys Met Glu Asp Glu Asp Glu Gln Gly Trp
      450                 455                 460
Cys Lys Gly Arg Leu Asp Asn Gly Gln Val Gly Leu Tyr Pro Ala Asn
465                 470                 475                 480
Tyr Val Glu Ala Ile Gln
                  485
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<210> 6205
<211> 926
<212> DNA
<213> Homo sapiens

<400> 6205
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nngcgcctcc canagagaat aggccccagc ttcaatggag gctgtggaga gatggagaag
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tggggtgaag attttggaga atctcggggg agagcaaggg aagggaagga gtttgccgac
120
agccagaagt tgctgttcat ggaaacttcg gccaaactga accaccaggt gtcggaggtg
180
ttcaatacag tggcccaaga gctactgcag agaagcgacg aggagggcca ggctctacng
240
ggggaagaca ccccctgcct gggccatggc cagctctagg tggattctga ttcactgtca
300
atgctgggtt gctcccgagc cctagatgtt cctggaagtt ggcccccttt atgaaaacca
360
cttccacag ccagtgggaa ctgccagagg aagatctggc gtcacatggc tcccaggaaa
420
gtgctgtgcc ctatccccac tgataccatc tgattccccg atgcctgtgc ctgttccacc
480
```

5389

tggacggtgg ccccctcagc ctggcagcct ctggacagag aggaaggaag gattggaaaa
540
gtccccgcag cacagcgacg gtgggaagat gccttacgtc tgatcttgat gggggcactg
600
gcctggagcc tgggcccacc tgcttctggg gggttgggga gcaggccaga tggaggtggt
660
ggtgccagga agaaatggag cgatgactga ctgtggggtg ggcccaggat ttccgcatct
720
tggtgaagtt gcccctggga agggcagctg ggggcagtgg cgccagttcc cttccatggt
780
ctcccggctg gcaatgtggt gaagctgagt ttctgtccaa tgagcaggaa gattctgaga
840
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900
cttttgacaa tctgaaaaaa aaaaaa
926

<210> 6206
<211> 92
<212> PRT
<213> Homo sapiens

<400> 6206
Xaa Arg Leu Pro Xaa Arg Ile Gly Pro Ser Phe Asn Gly Gly Cys Gly
1   5   10   15
Glu Met Glu Lys Trp Gly Glu Asp Phe Gly Glu Ser Arg Gly Arg Ala
            20   25   30
Arg Glu Gly Lys Glu Phe Ala Asp Ser Gln Lys Leu Leu Phe Met Glu
        35   40   45
Thr Ser Ala Lys Leu Asn His Gln Val Ser Glu Val Phe Asn Thr Val
    50   55   60
Ala Gln Glu Leu Leu Gln Arg Ser Asp Glu Glu Gly Gln Ala Leu Xaa
65   70   75   80
Gly Glu Asp Thr Pro Cys Leu Gly His Gly Gln Leu
                85   90

<210> 6207
<211> 1384
<212> DNA
<213> Homo sapiens

<400> 6207
nntgatcaga ggtcctgggt gtctggggaa gctgggctgt gcgtgtatgc gtctaccatg
60
tgggggtgcc tgtgagtgtg ctggggcgtc tgcagtgaag gcctcctgag accactccac
120
ggaaacaccg ggaatccctg cagctgagcc tgtctctcac gggaccggga agctggagag
180
agccccaacc ctgcccgctg gggccgagct ccctgctcct gcagcagtcc cgtgccccac
240
actctgagtc tgccctatcc acagctgctg ggcctctctg tggccaccat ggtgactctt
300
acctacttcg gggcccactt tgctgtcatc cgccgagcgt ccctggagaa gaacccgtac
360

5390

caggctgtgc accaatgggc cttctctgcg gggttgagcc tggtgggcct cctgactctg
420
ggagccgtgc tgagcgctgc agccaccgtg agggaggccc agggcctcat ggcaggggc
480
ttcctgtgct tctccctggc gttctgygca caggtgcagg tggtgttctg gagactccac
540
agccccaccc aggtggagga cgccatgctg gacacctacg acctggtata tgagcaggcg
600
atgaaaggta cgtcccacgt ccggcggcag gagctggcgg ccatccagga cgtgtttctg
660
tgctgtggga agaagtctcc tttcagccgt ctggggagca cagaggctga cctgtgtcag
720
ggagaggagg cggcgagaga ggactgcctt cagggcatcc ggagcttcct gaggacacac
780
cagcaggtcg cctccagcct gaccagcatc ggcctggccc tcacggtgtc cgccttgctc
840
ttcagctcct tcctgtggtt tgccatccgc tgtggctgca gcttggaccg caagggcaaa
900
tacaccctga ccccacgagc atgtggccgc cagccccagg agcccagcct cttgagatgc
960
tcccagggtg gacccacaca ttgtctccac tccgaagcag ttgctattgg tccaagagga
1020
tgctcgggta gtcttcggtg gctgcaggag agcgatgctg cgcctctgcc cctctcctgc
1080
cacctggctg cccacagagc tctccagggc agaagtcgcg gtgggctcag tgggtgccct
1140
gagcggggtc tctcagactg acgtcaggcc ttggtgggct gcactctcac ctggaggctc
1200
cggggaagca tctgcctcca ggaccattca ggctgttgac aagtcaactc ctcatggctg
1260
taggactgag gttcccaagt ccttgtccct ggtcctgtgg tccctccacc ttcaaaccag
1320
caatggtgca ttgagcaaat tgtggtcaaa tatacatcac atcaaattta ccatcttaaa
1380
aaaa
1384

<210> 6208
<211> 290
<212> PRT
<213> Homo sapiens

<400> 6208
Met Val Thr Leu Thr Tyr Phe Gly Ala His Phe Ala Val Ile Arg Arg
1   5   10   15
Ala Ser Leu Glu Lys Asn Pro Tyr Gln Ala Val His Gln Trp Ala Phe
                20   25   30
Ser Ala Gly Leu Ser Leu Val Gly Leu Leu Thr Leu Gly Ala Val Leu
                35   40   45
Ser Ala Ala Ala Thr Val Arg Glu Ala Gln Gly Leu Met Ala Gly Gly
        50   55   60
Phe Leu Cys Phe Ser Leu Ala Phe Xaa Ala Gln Val Gln Val Val Phe
65   70   75   80
Trp Arg Leu His Ser Pro Thr Gln Val Glu Asp Ala Met Leu Asp Thr

5391

```
                        85                    90                    95
Tyr Asp Leu Val Tyr Glu Gln Ala Met Lys Gly Thr Ser His Val Arg
            100                   105                   110
Arg Gln Glu Leu Ala Ala Ile Gln Asp Val Phe Leu Cys Cys Gly Lys
        115                   120                   125
Lys Ser Pro Phe Ser Arg Leu Gly Ser Thr Glu Ala Asp Leu Cys Gln
    130                   135                   140
Gly Glu Glu Ala Ala Arg Glu Asp Cys Leu Gln Gly Ile Arg Ser Phe
145                   150                   155                   160
Leu Arg Thr His Gln Gln Val Ala Ser Ser Leu Thr Ser Ile Gly Leu
                165                   170                   175
Ala Leu Thr Val Ser Ala Leu Leu Phe Ser Ser Phe Leu Trp Phe Ala
            180                   185                   190
Ile Arg Cys Gly Cys Ser Leu Asp Arg Lys Gly Lys Tyr Thr Leu Thr
        195                   200                   205
Pro Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro Ser Leu Leu Arg Cys
    210                   215                   220
Ser Gln Gly Gly Pro Thr His Cys Leu His Ser Glu Ala Val Ala Ile
225                   230                   235                   240
Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp Leu Gln Glu Ser Asp
                245                   250                   255
Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala Ala His Arg Ala Leu
            260                   265                   270
Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys Pro Glu Arg Gly Leu
        275                   280                   285
Ser Asp
    290


<210> 6209
<211> 2269
<212> DNA
<213> Homo sapiens


<400> 6209
ggcaggctgg gaattagcca gcaaagatgc cgatgaggtc atcaagcaga aggaaatctc
60
acccacacca ggtggactta caaggctgtg tgtgccctgg gcagggtgga catgtccagg
120
gcggggaaac cctggatatt tcactctgaa gtggtttctt gaaagaaaac tcaactgact
180
caggccatga gcatctttta cactgaagca agcatctcct cacaagtgcc tcctacaagt
240
cactagagtc atattcaaca ttacaaaatg cagtgctact taaattttaa agcactgagg
300
gaccaagaaa tgggctgatc aagtccttgg ccactcactg ttaagagcca ggatttacag
360
atcaatgact gttcctattg tccaagaaat aattttctag caaagcatac acactttatt
420
aaatttcaca gccagcagcg ctttcagtcc acaacagatt tctcagagga aacatggata
480
ttttgcgtag gcagaaacag tgaggagtac aaagcaaagc tataaatacc accaatggtt
540
ctgctatgtg catccgatat tttttgcccg atctgaaata ctgcaagggc ttaaccattc
600
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5392

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aaacaccgca tgacaacgaa cccagtggac tgtgaaactc aggctgcagg agggtggctt
660
gtcagctggt gaagccactt ggctttggac tccatcggtc atctttacgc aagagcagag
720
atgaacggtg ggtcacggct atgacgtgaa ggagaaagag aagacacact cacagaacag
780
gatggagagc ttcaataatt ttttaaaagc ttggaaccac cacctgcttt cccaatcttg
840
ggctggggtt ttgacttttc ttgatcatca atctgacttg aagccttta ccagttacaa
900
tacagacatg gccagatgac ctgcttgtta ggaaggctgt ggccatcttt gtttctgaaa
960
cagtcttatc tcatctgtcc actgctgctc tggaagggtc aggaccagca ctgcagacac
1020
tcggccatgc tgtgagtgag cccagacata cgcgtggaat ctgaacaccc aacgctggcg
1080
ttcccgtgcc agtctgaggg ctgcggctcc agcgcttgtc cacacacacg cctgcctctc
1140
tctagttcct ccactgcctg gcttcctcgc ttgcaaaacc cagcatgtga aatgaggaca
1200
cctccacgga gacccttccg agcagggagg tttcatcaca cctttcgttc ttgccaagga
1260
gtctatcgcc tcatccacaa catctgcttg cgggagaaac agcaaatgtg tccctctgag
1320
ggaaggactg aggagggctt tggtagtcac agattgagac acatttctgc gaaaactggt
1380
attatgtttc tgcacaggaa aacaaagtgt taaaaatatt cccatcctcc ctccaactcc
1440
cttctgtcac acagtcccaa gtgaacttga aaaaggtcca gaagtgaaca cttagggtgc
1500
atttaccttt ctcctgaaga tgggaagaca cacggatgct tgcctaaaat atctgccgag
1560
aggtgagcag ctgtggcctg ggaaggcgct tgctcttcct ccacatcagc cagaaggcag
1620
atcacacctt cagagcaccc tacagaaccc agatggcgaa tcaaagtgca gaaaaagaac
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1800
cctgtggttt ctgcctgacc cttctaagcc agaggtgaga aaacaactcc cagagaccac
1860
gactctcacc ctcggaggta cctgttcccc tgcaggtgtg gctctctgac aacccctagg
1920
caggggtggg ctccagcttt tggaagcaac cctacctagc tggcccccca agcattaaga
1980
agcttccctg atggggccat gttttggtct cctttaagc cctcagtcac aatgtacctt
2040
ctgagcttgt cctactattc agatgatttt ctctctgagt tgcaatactg ctcaatttag
2100
gtggctacct gtgttcattc aagctctgga agtgtggaag ggaacttaat cattgagttt
2160
ctgtgaagta ttttgccatc ctaaaatccc tgagagtgaa actgttgaat catgctcact
2220
```

5393

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ttcttcacat acatactctt ggactatggg gaccaagtct gttgaattc
2269
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```
<210> 6210
<211> 165
<212> PRT
<213> Homo sapiens
```

```
<400> 6210
Met Gly Ile Phe Leu Thr Leu Cys Phe Pro Val Gln Lys His Asn Thr
1               5                   10                  15
Ser Phe Arg Arg Asn Val Ser Gln Ser Val Thr Thr Lys Ala Leu Leu
            20                  25                  30
Ser Pro Ser Leu Arg Gly Thr His Leu Leu Phe Leu Pro Gln Ala Asp
        35                  40                  45
Val Val Asp Glu Ala Ile Asp Ser Leu Ala Arg Thr Lys Gly Val Met
    50                  55                  60
Lys Pro Pro Cys Ser Glu Gly Ser Pro Trp Arg Cys Pro His Phe Thr
65                  70                  75                  80
Cys Trp Val Leu Gln Ala Arg Lys Pro Gly Ser Gly Gly Thr Arg Glu
                85                  90                  95
Arg Gln Ala Cys Val Trp Thr Ser Ala Gly Ala Ala Ala Leu Arg Leu
            100                 105                 110
Ala Arg Glu Arg Gln Arg Trp Val Phe Arg Phe His Ala Tyr Val Trp
        115                 120                 125
Ala His Ser Gln His Gly Arg Val Ser Ala Val Leu Val Leu Thr Leu
    130                 135                 140
Pro Glu Gln Gln Trp Thr Asp Glu Ile Arg Leu Phe Gln Lys Gln Arg
145                 150                 155                 160
Trp Pro Gln Pro Ser
                165
```

```
<210> 6211
<211> 2163
<212> DNA
<213> Homo sapiens
```

```
<400> 6211
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gacacccggc gggagctggc ggagctcgtg aaggggaagc aggagctggc ggaaacattg
120
gcaaatttgg agcgacagat ctatgctttt gagggaagct acctggaaga cactcagatg
180
tatggcaata ttattcgtgg ctggngatcg gtatctgacc aaccannaaa aaactccaat
240
agcaaaaatg atcgaaggaa ccggaagttt aaggaagctg agcggctctt cagtaaatcc
300
tcggttacct cagcagctgc agtaagtgca ttggcaggag ttcaggacca gctcattgaa
360
aagagggagc caggaagtgg gacggaaagt gacacttctc cagacttcca caatcaggaa
420
aatgagccca gccaggagga ccctgaggat ctggatggat ctgtgcaggg agtgaaacct
480
```

```
cagaaggctg cttcttctac ttcctcaggg agtcaccaca gcagccataa aaagcgaaag
540
aataaaaacc ggcacagccc gtctggcatg tttgattatg actttgagat tgatctgaag
600
ttaaacaaaa aaccacgagc tgactattag aagacacatt agtgcagaag cttccaggct
660
gtagagccct gcttcccttc tctgacctca caaagataaa catccttcac ctgagttcgt
720
ggccatccac ctctgctctc ccagacccag tgcctgtgac tttgagtagt ttgttctaaa
780
tgtggtgaca aacaagtcat ttctgtaaga cattgggtct tactttatgt gatttttagt
840
aacagaactg caggaagatc aagacaatgt tgtaatcccg gcaagttgct aactgtgcgt
900
ttctcccttc ttagaatgaa tgtctccccc aaaactggct ggcaccagct tcatctgtga
960
tacccttcaa gaaatgttct ctggtttgt tttatgctga aagtagaaca caagtcacat
1020
ttcagatgga ggctgtaaat atctggcatt ttcttatatt gttttatgtt ttcttgtttt
1080
tctcttgttg tttttatctt attttctttg gggttttttt gtaatgcctt tgtacagctc
1140
atactttcct gctgacatat ctgatcatct ctttcatgca gttgccaata ttcataactg
1200
aaaataatct ggtttatcat aagtaaaatg ggaaacttgc ctctgttttt tgcaagggga
1260
ggtaaagagt gtttagtaat tacctatctt aaatctttct gagttggtag tagattcatg
1320
ttcaaggaac aggaaaaatg gaaaaacata agtttaaatc agttcttttt aaataacttt
1380
ttattctttt gtataaataa aatttcacag gcttcaaatt ctcatgcttt acttttaaac
1440
ccgagattgt tttttcact tatttattca tatcatgcct tatggaaatt tctttttctg
1500
tattttctct ctttgctggt attcacctga ttaaatattg ctctaaaaat caccatggca
1560
tatggaaagt ctcaaaatta taccaaaagt gataacttat gtcgttctta agtggagtga
1620
aaggatagca tcagtgatag ccagtgttgc ccaccaggtc tcccttcctt ggagggcttg
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ttggggctga ggaatctgct agtaatcgtt acctgcctct agtgctgtgg tgaacttgcg
1740
acagggtctg gctgcacatt ggaatcacct gagaagcttt aaaatactca tgcctggatc
1800
ccatccctag agactggggt acagcctagt tattgggaat ttctttaaaa gagttcctgg
1860
gattctgata agaagccagg ttgagaacca ctacattaga agactgaatg gtttaattta
1920
catcctatgt tatgattggt ccaagggata agatttgggg tctaaccttt cctttcactc
1980
tagttagtca tagtccttga cttatgccta tatctttgta agaaatagta tgtttcattt
2040
gtgatagtat tggtagggct gaatatggat ggcatctact gtaaaacaag tctaccttgt
2100
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5395

cagatgtgca aaagctttca ctcttgttct caaataaact tttgtgggtt tttttaaaaa
2160
aaa
2163

<210> 6212
<211> 209
<212> PRT
<213> Homo sapiens

<400> 6212
Xaa Arg Pro Pro Gln Pro Asn Met Ala Met His Asn Lys Ala Ala Pro
1   5   10   15
Pro Gln Ile Pro Asp Thr Arg Arg Glu Leu Ala Glu Leu Val Lys Gly
            20   25   30
Lys Gln Glu Leu Ala Glu Thr Leu Ala Asn Leu Glu Arg Gln Ile Tyr
        35   40   45
Ala Phe Glu Gly Ser Tyr Leu Glu Asp Thr Gln Met Tyr Gly Asn Ile
    50   55   60
Ile Arg Gly Trp Xaa Ser Val Ser Asp Gln Pro Xaa Lys Asn Ser Asn
65   70   75   80
Ser Lys Asn Asp Arg Arg Asn Arg Lys Phe Lys Glu Ala Glu Arg Leu
                85   90   95
Phe Ser Lys Ser Ser Val Thr Ser Ala Ala Ala Val Ser Ala Leu Ala
            100   105   110
Gly Val Gln Asp Gln Leu Ile Glu Lys Arg Glu Pro Gly Ser Gly Thr
        115   120   125
Glu Ser Asp Thr Ser Pro Asp Phe His Asn Gln Glu Asn Glu Pro Ser
    130   135   140
Gln Glu Asp Pro Glu Asp Leu Asp Gly Ser Val Gln Gly Val Lys Pro
145   150   155   160
Gln Lys Ala Ala Ser Ser Thr Ser Ser Gly Ser His His Ser Ser His
                165   170   175
Lys Lys Arg Lys Asn Lys Asn Arg His Ser Pro Ser Gly Met Phe Asp
            180   185   190
Tyr Asp Phe Glu Ile Asp Leu Lys Leu Asn Lys Lys Pro Arg Ala Asp
        195   200   205
Tyr

<210> 6213
<211> 1160
<212> DNA
<213> Homo sapiens

<400> 6213
acgcgtgaag ggaaggggaa agaggtcacc aagggcagag gtgtccaggc cggagccagg
60
ggccccactg ttgggatgct ggctgcagtg gggcgcccca agcccaggtc ccctctgtct
120
tctctttcga ctttgcagct gtacttgttt tgctcctcta cccgcaggag ctgacatgga
180
cccaaatcct cgggccgccc tggagcgcca gcagctccgc cttcgggagc ggcaaaaatt
240

5396

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cttcgaggac attttacagc cagagacaga gtttgtcttt cctctgtccc atctgcatct
300
cgagtcgcag agaccccca taggtagtat ctcatccatg gaagtgaatg tggacacact
360
ggagcaagta gaacttattg accttgggga cccggatgca gcagatgtgt tcttgccttg
420
cgaagatcct ccaccaaccc cccagtcgtc tggggtggac aaccatttgg aggagctgag
480
cctgccnggt gcctacatca gacaggacca catctaggac ctcctcctcc tcctcctccg
540
actcctccac caacctgcat agcccaaatc caagtgatga tggagcagat acgcccttgg
600
cacagtcgga tgaagaggag gaaaggggtg atggaggggc agagcctgga gcctgcagct
660
agcagtgggc ccctgcctac agactgacca cgctggctat tctccacatg agaccacagg
720
cccagccaga gcctgtcggg agaagaccag actctttact tgcagtaggc accagaggtg
780
ggaaggatgg tgggattgtg tacctttcta agaattaacc ctctcctgct ttactgctaa
840
ttttttcctg ctgcaaccct cccaccagtt tttggcttac tcctgagata tgatttgcaa
900
atgaggagag agaagatgag gttggacaag atgccactgc ttttcttagc actcttccct
960
cccctaaacc atcccgtagt cttctaatac agtctctcag acaagtgtct ctagatggat
1020
gtgaactcct taactcatca agtaaggtgg tactcaagcc atgctgcctc cttacatcct
1080
ttttggaaca gagcacggta taaataataa actaataata atatgccaac aaaaaaaaaa
1140
aaaaaaaaaa aaaaaaaaaa
1160
```

```
<210> 6214
<211> 101
<212> PRT
<213> Homo sapiens
```

```
<400> 6214
Pro Trp Gly Pro Gly Cys Ser Arg Cys Val Leu Ala Leu Arg Arg Ser
1               5                   10                  15
Ser Thr Asn Pro Pro Val Val Trp Gly Gly Gln Pro Phe Gly Gly Ala
            20                  25                  30
Glu Pro Ala Xaa Cys Leu His Gln Thr Gly Pro His Leu Gly Pro Pro
        35                  40                  45
Pro Pro Pro Pro Pro Thr Pro Pro Pro Thr Cys Ile Ala Gln Ile Gln
    50                  ·55                 60
Val Met Met Glu Gln Ile Arg Pro Trp His Ser Arg Met Lys Arg Arg
65                  70                  75                  80
Lys Gly Val Met Glu Gly Gln Ser Leu Glu Pro Ala Ala Ser Ser Gly
            85                  90          ·       95
Pro Leu Pro Thr Asp
            100
```

5397

<210> 6215
<211> 651
<212> DNA
<213> Homo sapiens

<400> 6215
ncagctccat aatcccctcc agaacattct gcaacagccc catgatcccc tctagaacat
60
tccacaatag cctcacaggt cccctgtaga acattccacc acagccccat gatccccttg
120
ctcctcagag catgtggccg ccagccccag gagcccagcc tcttgagatg ctcccagggt
180
ggacccacac attgtctcca ctccgaagca gttgctattg gtccaagagg atgctcgggt
240
agtcttcggt ggctgcagga gagcgatgct gcgcctctgc ccctctcctg ccacctggct
300
gcccacagag ctctccaggg cagaagtcgc ggtgggctca gtgggtgccc tgagcggggt
360
ctctcagact gacgtcaggc cttggtgggc tgcactctca cctggaggct ccggggaagc
420
atctgcctcc aggaccattc aggctgttga caagtcaact cctcatggct gtaggactga
480
ggttcccaag tccttgtccc tggtcctgtg gtccctccac cttcaaacca gcaatggtgc
540
attgagcaaa ttgtggtcaa atatacatca catcaaattt accatcttaa ccattgttaa
600
gtgtatggtt tgtggcatta aatacattca cattgttgtg caaccatcac c
651

<210> 6216
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6216
Met Ile Pro Leu Leu Leu Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro
1   5   10   15
Ser Leu Leu Arg Cys Ser Gln Gly Gly Pro Thr His Cys Leu His Ser
            20   25   30
Glu Ala Val Ala Ile Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp
        35   40   45
Leu Gln Glu Ser Asp Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala
    50   55   60
Ala His Arg Ala Leu Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys
65   70   75   80
Pro Glu Arg Gly Leu Ser Asp
                85

<210> 6217
<211> 2955
<212> DNA
<213> Homo sapiens

<400> 6217

5398

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ngcagcgggg aggcgggagc cgcgggcgga gccgcccggc gaggcgtggg ggctgcgggg
60
ccggcccatc cgtgggggcg acttgagcgt tgagggcgcg cggggaggcg agccaccatg
120
ttcagccagc agcagcagca gcagctccag caacagcagc agcagctcca gcagttacag
180
cagcagcagc tccagcagca gcaattgcag cagcagcagt tactgcagct ccagcagctg
240
ctccagcagt ccccaccaca ggccccgttg cccatggctg tcagccgggg gctcccccg
300
cagcagccac agcagccgct tctgaatctc cagggcacca actcagcctc cctcctcaac
360
ggctccatgc tgcagagagc tttgctttta cagcagttgc aaggactgga ccagtttgca
420
atgccaccag ccacgtatga cactgccggt ctcaccatgc ccacagcaac actgggtaac
480
ctccgaggct atggcatggc atccccaggc ctcgcagccc ccagcctcac accccacaa
540
ctggccactc caaatttgca acagttcttt ccccaggcca ctcgccagtc cttgctggga
600
cctcctcctg ttggggtccc catgaaccct tcccagttca acctttcagg acggaacccc
660
cagaaacagg cccggacctc ctcctctacc accccaatc gaaaggattc ttcttctcag
720
acaatgcctg tggaagacaa gtcagacccc ccagaggggt ctgaggaagc cgcagagccc
780
cggatggaca caccagaaga ccaagattta ctgccctgcc cagaggacat cgccaaggaa
840
aaacgcactc cagcacctga gcctgagcct tgtgaggcgt ccgagctgcc agcaaagaga
900
ttgaggagct cagaagagcc cacagagaag gaacctccag ggcagttaca ggtgaaggcc
960
cagccgcagg cccggatgac agtaccgaaa cagacacaga caccagacct gctgcctgag
1020
gccctggaag cccaagtgct gccacgattc cagccacggg tcctgcaggt ccaggcccag
1080
gtgcagtcac agactcagcc gcggatacca tccacagaca cccaggtgca gccaaagctg
1140
cagaagcagg cgcaaacaca gacctctcca gagcacttag tgctgcaaca gaagcaggtg
1200
cagccacagc tgcagcagga ggcagagcca cagaagcagg tgcagccaca ggtacagcca
1260
caggcacatt cacagggccc aaggcaggtg cagctgcagc aggaggcaga gccgctgaag
1320
caggtgcagc cacaggtgca gccccaggca cattcacagc ccccaaggca ggtgcagctg
1380
cagctgcaga agcaggtcca gacacagaca tatccacagg tccacacaca ggcacagcca
1440
agcgtccagc cacaggagca tcctccagcg caggtgtcag tacagccacc agagcagacc
1500
catgagcagc ctcacaccca gccgcaggtg tcgttgctgg ctccagagca aacaccagtt
1560
gtggttcatg tctgcgggct ggagatgcca cctgatgcag tagaagctgg tggaggcatg
1620
```

                                    5399

```
gaaaagacct tgccagagcc tgtgggcacc caagtcagca tggaagagat tcagaatgag
1680
tcggcctgtg gcctagatgt gggagaatgt gaaaacagag cgagagagat gccaggggta
1740
tggggcgccg ggggctccct gaaggtcacc attctgcaga gcagtgacag ccgggccttt
1800
agcactgtac ccctgacacc tgtcccccgc cccagtgact ccgtctcctt cacccctgcg
1860
gctaccagca ctccctctaa gcaggccctc cagttcttct gctacatctg caaggccagc
1920
tgctccagcc agcaggagtt ccaggaccac atgtcggagc ctcagcacca gcagcggcta
1980
ggggagatcc agcacatgag ccaagcctgc ctcctgtccc tgctgcccgt gccccgggac
2040
gtcctggaga cagaggatga ggagcctcca ccaaggcgct ggtgcaacac ctgccagctc
2100
tactacatgg gggacctgat ccaacaccgc aggacacagg accacaagat tgccaaacaa
2160
tccttgcgac ccttctgcac cgtttgcaac cgctacttca aaacccctcg caagtttgtg
2220
gagcacgtga agtcccaggg gcataaggac aaagccaagg agctgaagtc gcttgagaaa
2280
gaaattgctg gccaagatga ggaccacttc attacagtgg acgctgtggg ttgcttcgag
2340
ggtgatgaag aagaggaaga ggatgatgag gatgaagaag agatcgaggt tgaggaggaa
2400
ctctgcaagc aggtgaggtc cagagatata tccagagagg agtggaaggg ctcggagacc
2460
tacagcccca atactgcata tggtgtggac ttcctggtgc ccgtgatggg ctatatctgc
2520
cgcatctgcc acaagttcta tcacagcaac tcaggggcac agctctccca ctgcaagtcc
2580
ctgggccact ttgagaacct gcagaaatac aaggcggcca agaaccccag ccccaccacc
2640
cgacctgtga gccgccggtg cgcaatcaac gcccggaacg ctttgacagc cctgttcacc
2700
tccagcggcc gcccacccct ccagcccaac acccaggaca aaacacccag caaggtgacg
2760
gctcgaccct cccagccccc actacctcgg cgctcaaccc gcctcaaaac ctgatagagg
2820
gacctccctg tccctggcct gcctgggtcc agatctgcta atgcttttta ggagtctgcc
2880
tggaaacttt gacatggttc atgtttttac tcaaaatcca ataaaacaag gtagtttggc
2940
aaaaaaaaaa aaaaa
2955
```

```
<210> 6218
<211> 133
<212> PRT
<213> Homo sapiens

<400> 6218
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
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5400

```
1                     5                   10                  15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
            20                  25                  30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
            35                  40                  45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
    50                  55                  60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65                  70                  75                  80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85                  90                  95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100                 105                 110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
        115                 120                 125
Thr Arg Leu Lys Thr
    130
```

```
<210> 6219
<211> 2495
<212> DNA
<213> Homo sapiens


<400> 6219
tttttttttt tttttttcgcg gtggaggatc aggtttaatg gtcactatga gggtatcgta
60
catcgttcca agcccggccc ccgccccagc cctccctcag ctgggaacac agccaggtgc
120
cctcagaccc ctggctctgc acaaggggggg cctgcccccct cgccccagnn ctatatacac
180
gacagcccat cctgctggcc gtggacaaaa gctgggagct ccntgtgccc agtcaggagc
240
ccctacagtc caccagctgc gcggccgggt ccagggngcc cactgtggtg ccagcgagtt
300
tctcaaaacc cagggcccag ccccagcnnt gggcccctgc caagcccag gcctgtgtgc
360
tgggatggag cctccacact gaggctggta aaagctgaac tcaacagcag caatgagagt
420
gctgggtggg cttgggggga tggggagcag gccccaccca gagcctcctc tgaaggaggg
480
gacgctgcgc ccttccttcc tgctgcccag actgccccta ccgggtccgg cgccggctga
540
ggtctaagta agcagggatg gggggtggca agaggagtgt aagtgaaagc acagacagtc
600
ggagactcgg ccagtgtaga cagacccaga gactcggcca gtgtagacag agccaggctg
660
ggcagcccgg cgacgctggc cccacgcaca cgggccaccc tggtgctggt gatcgatacg
720
gcagggaggg ggtgggcagg gagggtcctg aacacatgtg ggctgctggg ctgctgggcc
780
ggggtgccta cactgtaact agcagcatag tgcttaacta gttaacaaga aatgctgctt
840
cccttgaat tgtttcgggg gtgtagaaat tgcacttatt tctatgaacc ccatggaggg
900
```

5401

```
atgcccacag ctgagcctcc aggcgaggca tggcaggtca gtgcctggcc gctgagcatc
960
cacgggccac agggcgggat cctcccggcc cccagggact gcagcctctg cggccacggg
1020
tgcagcgagg accggaaccc acaggggaa cctgagcaac gtctgaggtg ccctgaagtg
1080
gctccaggcg agaccggagc cacacagtcc cggggagcac gaggcggccc agccccaggt
1140
cccggtgcag agggagtggc ctgatggtga ctgggcggag gcctctgccc ctcacaggac
1200
gtcgtcaaag tccagcagct tcgagtgctg gcggctcttc cacaggcgat acaaccggaa
1260
gtcaaagtac gtctcgatca tctgcttccc ttgggctgag agctccaggg gtgactcgaa
1320
ggtgaccta taaggagtca tgagggtcct gaggttctgg aacagcttct ctccattggg
1380
gttccccaga atgtagcagc ccatgatgtg gatgacgttc ggctctgggt tcactttgct
1440
catcaggcgg ctcagccgct tccagaagtg aatcatgtcc tcttccttct ccactttggc
1500
aaaggtggcc accttgttct tgaggagata gaggtgtcca ggacctccct ggcagaaaat
1560
cagcatttc cagatcttgg ctcccttgtg gtagacgttc agcttcctct ctatctcctc
1620
aaggatgtcc tcgaaggttg cgtgctcatg gtcgtagagg atggggatga tggaggggtc
1680
atcccggcgg atgatagtgg ggatgtactc agccttgggc accttggagg aaatgagcat
1740
gacctttggt ggcacgaagc cttcggtgtc gcaggccaca gcctccaggc ccttctcagt
1800
gtcccagtcc aggtcctcga aggcctcgtc cagcgtgcag tgggagctct gcaggtcact
1860
gctgtctcgg gagtcgtggg aagtgtcggc tttcatgggg gtggggtcgc tccaggaccg
1920
gctgaagctc cgctcgcgcg ctcagcgaac gtctgggcct tacaccctcc ggctgccgac
1980
catgcgcagg tgtttgcgga agttcctctg gattacagac gcggaatcat tctcccgttt
2040
ccggcgcttc ctctccgcgt agccctgaa caccgagatg gcttgcatag ttgtggttgc
2100
tgtctggaag ctgaaaagat tttccttggg gaaccaggta cgaatagga tgtcgtcaga
2160
cacacggtca acgctgtaca tcctctccag cttcttgcgg cgaccggagg tctcaggcag
2220
aggtggctgg tccagcccaa aggcccgagg ggtggggcca ggagccagct gggcacatac
2280
cggggcactc ccttggagcc cctggcgngc tgcccgccca gctttctggc agggcctgct
2340
gacgtcctcc cggctgccac cagggctggc gcgcaggggc tggctgtgat ggtgagggtg
2400
ccgctgccgc cgccccttca ccaccgccag ctcaatggcc tccgcctcag ggctgggcag
2460
cagggcaggc tccccagaga tgaagtacac tcgag
2495
```

                                    5402

<210> 6220
<211> 179
<212> PRT
<213> Homo sapiens

<400> 6220
```
Phe Phe Phe Phe Phe Ser Arg Trp Arg Ile Arg Phe Asn Gly His Tyr
1               5                   10                  15
Glu Gly Ile Val His Arg Ser Lys Pro Gly Pro Arg Pro Ser Pro Pro
                20                  25                  30
Ser Ala Gly Asn Thr Ala Arg Cys Pro Gln Thr Pro Gly Ser Ala Gln
            35                  40                  45
Gly Gly Pro Ala Pro Ser Pro Gln Xaa Tyr Ile His Asp Ser Pro Ser
        50                  55                  60
Cys Trp Pro Trp Thr Lys Ala Gly Ser Ser Xaa Cys Pro Val Arg Ser
65              70                  75                  80
Pro Tyr Ser Pro Pro Ala Ala Arg Pro Gly Pro Gly Xaa Pro Leu Trp
                85                  90                  95
Cys Gln Arg Val Ser Gln Asn Pro Gly Pro Ser Pro Ser Xaa Gly Pro
            100                 105                 110
Leu Pro Ser Pro Arg Pro Val Cys Trp Asp Gly Ala Ser Thr Leu Arg
        115                 120                 125
Leu Val Lys Ala Glu Leu Asn Ser Ser Asn Glu Ser Ala Gly Trp Ala
        130                 135                 140
Trp Gly Asp Gly Glu Gln Ala Pro Pro Arg Ala Ser Ser Glu Gly Gly
145                 150                 155                 160
Asp Ala Ala Pro Phe Leu Pro Ala Ala Gln Thr Ala Pro Thr Gly Ser
                165                 170                 175
Gly Ala Gly
```

<210> 6221
<211> 1487
<212> DNA
<213> Homo sapiens

<400> 6221
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nnctgcagga aaaagtgctg ctctgacgca gatgctctag tgttttctaa gtgacagctc
60
ttagggcacc ctggatgccc cttgattcca ccctcattac ttgtcctctc tcggtgctgc
120
ctcttgttcc cttgctttgt tttgttttca tattactccc gtatttcctg acatatctgc
180
atttttctac ttactgtgtc ccgatgcagc tgctcctgtt tttcacatcc aaggtttctc
240
ctccatggca ctactgacgt tttgggctga cgaattcttt ggggacagga tggggcatgt
300
cctgtgcatt ttaggatgtt gagtagcagc cctggcctgc atccactaga tgccagttga
360
acctccccag gttctgaagc cagacacaag atgaaaaagc taactccaaa acagaaattt
420
tctgaagatt tagagtcata taagatatca gtggtaatgc aggaatcagc tgagaaactt
480
```

5403

```
tcagaaaagt tacataagtg taaagaattt gtggacagtt gcaggcttac tttccctact
540
agtggtgatg aatacagcag gggcttcctt caaaacctta accttattca agatcagaat
600
gcgcaaacaa ggtggaagca gggcagatat gatgaggatg gcaaacccct caatcaaaga
660
tctttgcttt tggggcatga gcgaattctc acaagagcaa agtcttatga atgcagtgaa
720
tgtggaaaag tcattaggcg taaggcatgg tttgatcaac atcaaagaat tcacttttta
780
gagaatcctt ttgagtgtaa ggtctgtggg caagccttca gacagcggtc agctcttacg
840
gtccataaac agtgtcacct gcaaaacaag ccatacagat gtcatgactg tggaaagtgt
900
tttcggcagc tcgcgtatct tgttgaacat aagaggattc acaccaaaga aaaaccttat
960
aaatgtagca aatgtgaaaa aacgtttagt cagaattcaa cccttattcg acatcaggtg
1020
atccatagtg gagaaaaacg ccataaatgc cttgagtgtg aaaagccctt tggccggcat
1080
tcaacccttc tatgtcatca acagattcac agtaaaccga acacccataa atgcagtgaa
1140
tgtggacagt cctttggtag gaatgtggat ctcattcagc atcaaagaat ccatacaaag
1200
gaggaattct ttcaatgtgg agaatgtggg aaaacgttta gttttaagag gaatctttt
1260
cgacatcagg tcattcacac tggaagccaa ctctaccaat gtgtcatatg tggaaaatct
1320
ttcaagtggc acacaagctt tattaagcac cagggcactc acaaaggaca gatatccaca
1380
tgatgttaat tggaaagcag tcattggaga actagaactt ataaacctct acttcaagtg
1440
tgtatcacgt aattgtttcc atgaaaagca ataaatgtaa caaaggg
1487
```

<210> 6222
<211> 330
<212> PRT
<213> Homo sapiens

<400> 6222

```
Met Lys Lys Leu Thr Pro Lys Gln Lys Phe Ser Glu Asp Leu Glu Ser
1               5                   10                  15
Tyr Lys Ile Ser Val Val Met Gln Glu Ser Ala Glu Lys Leu Ser Glu
            20                  25                  30
Lys Leu His Lys Cys Lys Glu Phe Val Asp Ser Cys Arg Leu Thr Phe
        35                  40                  45
Pro Thr Ser Gly Asp Glu Tyr Ser Arg Gly Phe Leu Gln Asn Leu Asn
    50                  55                  60
Leu Ile Gln Asp Gln Asn Ala Gln Thr Arg Trp Lys Gln Gly Arg Tyr
65                  70                  75                  80
Asp Glu Asp Gly Lys Pro Phe Asn Gln Arg Ser Leu Leu Leu Gly His
                85                  90                  95
Glu Arg Ile Leu Thr Arg Ala Lys Ser Tyr Glu Cys Ser Glu Cys Gly
```

```
                 100                 105                 110
Lys Val Ile Arg Arg Lys Ala Trp Phe Asp Gln His Gln Arg Ile His
         115                 120                 125
Phe Leu Glu Asn Pro Phe Glu Cys Lys Val Cys Gly Gln Ala Phe Arg
     130                 135                 140
Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys
145                 150                 155                 160
Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg·Gln Leu Ala Tyr
                 165                 170                 175
Leu Val Glu His Lys Arg Ile His Thr Lys Glu Lys Pro Tyr Lys Cys
             180                 185                 190
Ser Lys Cys Glu Lys Thr Phe Ser Gln Asn Ser Thr Leu Ile Arg His
         195                 200                 205
Gln Val Ile His Ser Gly Glu Lys Arg His Lys Cys Leu Glu Cys Gly
     210                 215                 220
Lys Ala Phe Gly Arg His Ser Thr Leu Leu Cys His Gln Gln Ile His
225                 230                 235                 240
Ser Lys Pro Asn Thr His Lys Cys Ser Glu Cys Gly Gln Ser Phe Gly
                 245                 250                 255
Arg Asn Val Asp Leu Ile Gln His Gln Arg Ile His Thr Lys Glu Glu
             260                 265                 270
Phe Phe Gln Cys Gly Glu Cys Gly Lys Thr Phe Ser Phe Lys Arg Asn
         275                 280                 285
Leu Phe Arg His Gln Val Ile His Thr Gly Ser Gln Leu Tyr Gln Cys
     290                 295                 300
Val Ile Cys Gly Lys Ser Phe Lys Trp His Thr Ser Phe Ile Lys His
305                 310                 315                 320
Gln Gly Thr His Lys Gly Gln Ile Ser Thr
                 325                 330
```

<210> 6223
<211> 944
<212> DNA
<213> Homo sapiens

<400> 6223
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acccccaccc tcactgtgca ccccccaccc tccacccaca cccccatccc cacctgcacc
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ccaccccaca ctcacaaccc cccactccca cctgcaacac ccccactccc cacccgcacc
120
ccccaacttc ccatcccccc actcctctcc attccctctc ttgcttgtgc gcataagcaa
180
gtcccactca ttgcaactgt aaccaatacc aagcatgaga acaggaacta gctccaccct
240
ctaaccccca ctccagctgc agacgccacg gagtttgtgc aggggcgcag cgctccagcc
300
atggcgcgtt cgctcgtcca cgacaccgtg ttctactgcc tgagtgtata ccaggtaaaa
360
ataagcccca cacctcagct gggggcagca tcaagcgcag aaggccatgt tggccaagga
420
gctccaggcc tcatgggtaa tatgaaccct gagggcggtg tgaaccacga gaacggcatg
480
aaccgcgatg gcggcatgat ccccgagggc ggcggtggaa accaggagcc tcggcagcag
540
```

5405

```
ccgcagcccc cgccggagga gccggcccag gcggccatgg agggtccgca gcccgagaac
600
atgcagccac gaactcggcg cacgaagttc acgctgttgc aggtggagga gctggaaagt
660
gttttccgac acactcaata ccctgatgtg cccacaagaa gggaacttgc cgaaaactta
720
ggtgtgactg aagacaaagt gcgggtcagt acacttgaaa aagcaatttg agaggacagc
780
cattctaaaa cctgcttcag ggcattgaag gctttgaagg ctttgtcctg aacgttctaa
840
agttgttgtt tttattattg tcttttttat gttgacaaat aagttttgaa gtttgggttc
900
cttgtcggta gaaaaggaag taagctccag cttatggttc tttc
944


<210> 6224
<211> 156
<212> PRT
<213> Homo sapiens


<400> 6224
Met Ala Arg Ser Leu Val His Asp Thr Val Phe Tyr Cys Leu Ser Val
1               5                   10                  15
Tyr Gln Val Lys Ile Ser Pro Thr Pro Gln Leu Gly Ala Ala Ser Ser
                20                  25                  30
Ala Glu Gly His Val Gly Gln Gly Ala Pro Gly Leu Met Gly Asn Met
            35                  40                  45
Asn Pro Glu Gly Gly Val Asn His Glu Asn Gly Met Asn Arg Asp Gly
        50                  55                  60
Gly Met Ile Pro Glu Gly Gly Gly Asn Gln Glu Pro Arg Gln Gln
65                  70                  75                  80
Pro Gln Pro Pro Glu Glu Pro Ala Gln Ala Ala Met Glu Gly Pro
                85                  90                  95
Gln Pro Glu Asn Met Gln Pro Arg Thr Arg Arg Thr Lys Phe Thr Leu
            100                 105                 110
Leu Gln Val Glu Glu Leu Glu Ser Val Phe Arg His Thr Gln Tyr Pro
            115                 120                 125
Asp Val Pro Thr Arg Arg Glu Leu Ala Glu Asn Leu Gly Val Thr Glu
        130                 135                 140
Asp Lys Val Arg Val Ser Thr Leu Glu Lys Ala Ile
145                 150                 155


<210> 6225
<211> 3851
<212> DNA
<213> Homo sapiens


<400> 6225
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agtgaatttc ggaagcagcc agtggggcat tccaggcaag gtgattttat caaatgtgtg
120
gaacagaaga cagatgcctt ggggaaacag tctgtgaaca gaggattcac taaggacaag
180
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5406

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actctcagtt caatctttaa cattgagatg gtaaaagaaa aaactgcaga agaaataaaa
240
cagatttggc agcaatattt tgcagcaaaa gatacagtct acgcagttat tcctgcagaa
300
aagtttgatt tgatctggaa ccgggctcag tcctgtccaa catttctatg tgctctgcca
360
agaagggaag gttatgagtt ttttgtagga caatggacag gtactgaact ccacttcact
420
gcacttataa atattcagac ccgaggggaa gctgcagcca gccagctgat tttatatcac
480
tatcctgaac ttaaggaaga aaagggcata gtgctgatga ctgcagaaat ggattccaca
540
tttctgaatg ttgctgaggc acagtgcatc gccaaccaag ttcagctctt ctacgctact
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gatcggaaag agacctacgg gttagtggag acctttaacc tcagaccaaa tgagttcaaa
660
tatatgtctg tcatcgctga attggagcaa agcggacttg gagcagaact gaaatgtgcc
720
cagaaccaaa ataagactta gaactgtaca ggttggccct tcacctagtt gactcagccc
780
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1020
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1080
cccaaatgat gagtttgtca tctttatgaa ctcatgacag gataataagc ttgaagacct
1140
gctgtagtta gatatgggct ttaatccttc ccatgcacca gtcagctgaa caaaagcata
1200
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1260
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1320
aatttcaggt atagttagat aaacaggtac agggcctgca tactattaaa ccatagtttg
1380
tggcacccgc ttttctaact ccacctgtta gaagctatgt gtttgaagga atgaatcagt
1440
gcagtataaa taaaattctt ttgtaaggag aagattaatc ctggtttgca tgattttttt
1500
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1560
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1620
ataatgaaat ctgagttatg tactgtccat tgtgtcaggg ctatgggctg attttatcaa
1680
aactcatctt gggactgaaa aattgtttgg aatgccagaa ataagaaagt tgttctccag
1740
agctggaaac ccatctttcg tttgtagtgt cactgttgtg gctccaagct cagtgatagg
1800
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aaaggacggt ggttacacac cagccttctg aacccaaggc ccccagtatt gttgtcagct
1860
gcctttacca tggcatttct ttctcttcct tttttcctg agatgaagtc ttgctctgtc
1920
ttgcccaggc tggagtacag tagcgtgatc tcagctcgct gcaacctcta cctccctggt
1980
tcaagtgatt ctgctgcgtc agcctcctga ggagctagga ttacaggcgc atgccaccat
2040
acctggctta tttttgtatt gttgtagaga cagggtttca ctttgttggc caggctggct
2100
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2160
caggtgtgag ccaccgtgcc tggcctgaca tttctttatt gatctaacat gctccactct
2220
gctgctcctg cctaagatct ggttatatga cactgaatgt ggtgagtggg aatttaagca
2280
gtattcgcag tttgtgtgtg tgtgttttct tccttccaga agaattttta taggttgggc
2340
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2400
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2460
gctgctatcc tttcactatt tctctaaagg ttgagctgtt aactaatgta aattctggac
2520
ctgcttctgg tcctggcagt ttatcttttg agaaacttga gtcttatctg ccctgccatt
2580
ttcattaaat gccttctgac cttctgaatg ttttgggtcc caagaatttt tgacatcaga
2640
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2700
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2760
gagtaagaag tggccattcg ttttaatcat tcctcctgga tttgtcctca gtccccaact
2820
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2880
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3060
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3120
tatctacctc ataggattat tgtgagaatt aaattaactt cactatagta gaaaatatca
3180
actaccatcc tttttctctac ttcccttgcc cctcattaaa gactaataca agttagcatt
3240
tcagatgtgt agatcattct ttattccagt taaaagaaca aactttatct catcagttct
3300
gaaactttaa gatgcagtag catcacctaa agtgctttta aaatgcagat tctcaggcct
3360
caaccgtaca ccaccccccc acacacgtac taaatcaaga atatgtgcag aaggtactgg
3420
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5408

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gaatctactt gttaatatgt gctccaaatg attctgatgt aggtaattag ccagccacac
3480
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3540
ctgtggatgc taactatagg atatttaggt tcctctgttc tttgtctccc atagtggccc
3600
cctttgcaaa ctccaaatac attatattta tttattcttg tgtctttttt cccccactag
3660
actgtgagct ccttgagggc caggacttat ctctgttcgc agtgccaagg acatggcctg
3720
gaccatagaa gatactcagt tttttgttga ataaataggt aatatggatt tcaaccaaaa
3780
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3840
aaaaaaaaaa a
3851


<210> 6226
<211> 246
<212> PRT
<213> Homo sapiens

<400> 6226
Xaa Ile Gln Leu Leu Arg Arg Ser Asp Pro Ala Ala Phe Glu Ser Arg
1               5                   10                  15
Leu Glu Lys Arg Ser Glu Phe Arg Lys Gln Pro Val Gly His Ser Arg
            20                  25                  30
Gln Gly Asp Phe Ile Lys Cys Val Glu Gln Lys Thr Asp Ala Leu Gly
        35                  40                  45
Lys Gln Ser Val Asn Arg Gly Phe Thr Lys Asp Lys Thr Leu Ser Ser
    50                  55                  60
Ile Phe Asn Ile Glu Met Val Lys Glu Lys Thr Ala Glu Glu Ile Lys
65                  70                  75                  80
Gln Ile Trp Gln Gln Tyr Phe Ala Ala Lys Asp Thr Val Tyr Ala Val
                85                  90                  95
Ile Pro Ala Glu Lys Phe Asp Leu Ile Trp Asn Arg Ala Gln Ser Cys
            100                 105                 110
Pro Thr Phe Leu Cys Ala Leu Pro Arg Arg Glu Gly Tyr Glu Phe Phe
            115                 120                 125
Val Gly Gln Trp Thr Gly Thr Glu Leu His Phe Thr Ala Leu Ile Asn
    130                 135                 140
Ile Gln Thr Arg Gly Glu Ala Ala Ser Gln Leu Ile Leu Tyr His
145                 150                 155                 160
Tyr Pro Glu Leu Lys Glu Glu Lys Gly Ile Val Leu Met Thr Ala Glu
                165                 170                 175
Met Asp Ser Thr Phe Leu Asn Val Ala Glu Ala Gln Cys Ile Ala Asn
            180                 185                 190
Gln Val Gln Leu Phe Tyr Ala Thr Asp Arg Lys Glu Thr Tyr Gly Leu
    195                 200                 205
Val Glu Thr Phe Asn Leu Arg Pro Asn Glu Phe Lys Tyr Met Ser Val
    210                 215                 220
Ile Ala Glu Leu Glu Gln Ser Gly Leu Gly Ala Glu Leu Lys Cys Ala
225                 230                 235                 240
Gln Asn Gln Asn Lys Thr
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245

<210> 6227
<211> 830
<212> DNA
<213> Homo sapiens

<400> 6227
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120
ccagggagag tcgctgcaga atgggaggta cagaatcgta tcccttctgg aactatatta
180
aaggccttga tggaaggtgg tgaaaatggg ccctggatga gatttatgag agcagaaata
240
acagcagagg gtttttacg agaatttggg agactttgct ctgaaatgtt aaagacctcc
300
gtgcctgtgg actcattttt ctctctgttg accagtgagc gagtggcaaa gcagttccca
360
gtgatgactg aggccataac tcaaattcgg gcaaaaggtc ttcagactgc agtcttgagc
420
aataattttt atcttcccaa ccagaaaagc ttttttgcccc tggaccggaa acagtttgat
480
gtgattgtgg agtcctgcat ggaagggatc tgtaagccag accctaggat ctacaagctg
540
tgcttggagc agctcggcct gcagccctct gagtccatct ttcttgatga ccttggaaca
600
aatctaaaag aagctgccag acttggtatt cacaccatta aggttaatga cccagagact
660
gcagtaaagg aattagaagc tctcttgggt tttacattga gagtaggtgt tccaaacact
720
cggcctgtga aaaagacgat ggaaattccg aaagattcct tgcagaagta cctcaaagac
780
ttactgggta tccagaccac aggcccattg gaactacttc agtttgatca
830

<210> 6228
<211> 271
<212> PRT
<213> Homo sapiens

<400> 6228
Lys His Thr Gln Arg Arg His Gln Gly Ser His Arg Trp Thr His Leu
1   5   10   15
Gly Gly Ser Thr Tyr Arg Ala Val Ile Phe Asp Met Gly Gly Val Leu
            20   25   30
Ile Pro Ser Pro Gly Arg Val Ala Ala Glu Trp Glu Val Gln Asn Arg
        35   40   45
Ile Pro Ser Gly Thr Ile Leu Lys Ala Leu Met Glu Gly Gly Glu Asn
    50   55   60
Gly Pro Trp Met Arg Phe Met Arg Ala Glu Ile Thr Ala Glu Gly Phe
65   70   75   80
Leu Arg Glu Phe Gly Arg Leu Cys Ser Glu Met Leu Lys Thr Ser Val

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                    85                    90                    95
Pro Val Asp Ser Phe Phe Ser Leu Leu Thr Ser Glu Arg Val Ala Lys
            100                   105                   110
Gln Phe Pro Val Met Thr Glu Ala Ile Thr Gln Ile Arg Ala Lys Gly
        115                   120                   125
Leu Gln Thr Ala Val Leu Ser Asn Asn Phe Tyr Leu Pro Asn Gln Lys
    130                   135                   140
Ser Phe Leu Pro Leu Asp Arg Lys Gln Phe Asp Val Ile Val Glu Ser
145                   150                   155                   160
Cys Met Glu Gly Ile Cys Lys Pro Asp Pro Arg Ile Tyr Lys Leu Cys
                165                   170                   175
Leu Glu Gln Leu Gly Leu Gln Pro Ser Glu Ser Ile Phe Leu Asp Asp
            180                   185                   190
Leu Gly Thr Asn Leu Lys Glu Ala Ala Arg Leu Gly Ile His Thr Ile
        195                   200                   205
Lys Val Asn Asp Pro Glu Thr Ala Val Lys Glu Leu Glu Ala Leu Leu
    210                   215                   220
Gly Phe Thr Leu Arg Val Gly Val Pro Asn Thr Arg Pro Val Lys Lys
225                   230                   235                   240
Thr Met Glu Ile Pro Lys Asp Ser Leu Gln Lys Tyr Leu Lys Asp Leu
                245                   250                   255
Leu Gly Ile Gln Thr Thr Gly Pro Leu Glu Leu Leu Gln Phe Asp
            260                   265                   270
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<210> 6229
<211> 3105
<212> DNA
<213> Homo sapiens

<400> 6229
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120
tgtgacgtcc ccaccaacgg ctgcggaccc gaccgctgga actccgcgtt cacccgcaaa
180
gacgagatca tcaccagcct cgtgtctgcc ttagactcca tgtgctcagc gctgtccaaa
240
ctgaacgccg aggtggcctg tgtcgccgtg cacgatgaga gcgcctttgt ggtgggcaca
300
gagaagggga gaatgttcct gaatgcccgg aaggagctac agtcagactt cctcaggttc
360
tgccgagggc ccccgtggaa ggatccggag gcagagcacc ccaagaaggt gcagcggggc
420
gagggtggag gccgtagcct ccctcggtcc tccctggaac atggctcaga tgtgtacctt
480
ctgcggaaga tggtagagga ggtgtttgat gttctttata gcgaggccct gggaagggcc
540
agtgtggtgc cactgcccta tgagaggctg ctcaggagc cagggctgct ggccgtgcag
600
gggctgcccg aaggcctggc cttccgaagg ccagccgagt atgaccccaa ggccctcatg
660
gccatcctgg aacacagcca ccgcatccgc ttcaagctca agaggccact tgaggatggc
720
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gggcgggact cgaaggccct ggtggagctg aacggtgtct ccctgattcc caaggggtca
780
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840
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900
cgagagctca agcaggaagc accttcctgc ccccttgccc ccagcgacct gggcctgagt
960
cggcccatgc cagagcccaa ggccaccggt gcccaagact tctccgactg ttgtggacag
1020
aagcccactg ggcctggtgg gcctctcatc cagaacgtcc atgcctccaa gcgcattctc
1080
ttctccatcg tccatgacaa gtcagagaag tgggacgcct tcataaagga aaccgaggac
1140
atcaacacgc tccgggagtg tgtgcagatc ctgtttaaca gcagatatgc ggaagccctg
1200
ggcctgggca acatggtccc cgtgccctac cggaagattg cctgtgaccc ggaggctgtg
1260
gagatcgtgg gcatcccgga caagatcccc ttcaagcgcc cctgcactta cggagtcccc
1320
aagctgaagc ggatcctgga ggagcgccat agtatccact tcatcattaa gaggatgttt
1380
gatgagcgaa tttttcacagg gaacaagttt accaaagaca ccacgaagct ggagccagcc
1440
agcccgccag aggacacctc tgcagaggtc tctagggcca ccgtccttga ccttgctggg
1500
aatgctcggt cagacaaggg cagcatgtct gaagactgtg ggccaggaac ctccggggag
1560
ctgggcgggc tgaggccgat caaaattgag ccagaggatc tggacatcat tcaggtcacc
1620
gtcccagacc cctcgccaac ctctgaggaa atgacagact cgatgcctgg gcacctgcca
1680
tcggaggatt ctggttatgg gatggagatg ctgacagaca aaggtctgag tgaggacgcg
1740
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1920
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1980
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2040
aaagagccca tcgtggatag tcaagagagg gattccgggg accctctggt ggacgagagc
2100
ctgaagagac agggctttca agaaaattat gacgcgaggc tctcacggat cgacatcgcc
2160
aacacactaa gggagcaggt ccaggacctt ttcaataaga aatacgggga agccttgggc
2220
atcaagtacc cggtccaggt cccctacaag cggatcaaga gtaaccccgg ctccgtgatc
2280
atcgaggggc tgccccagg aatcccgttc cgaaagccct gtaccttcgg ctcccagaac
2340
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ctggagagga ttcttgctgt ggctgacaag atcaagttca cagtcaccag gcctttccaa
2400
ggactcatcc caaagcctga tgaagatgac gccaacagac tcggggagaa ggtgatcctg
2460
cgggagcagg tgaaggaact cttcaacgag aaatacggtg aggccctggg cctgaaccgg
2520
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2640
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2700
gaaatctgca atgatgccaa ggtgccagcc aaagacagca gcattcccaa gcgcaagaga
2760
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2820
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2880
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3000
atattcggat atgtatcgat gccttttagt ttttccaatg atttttacac tatattcctg
3060
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3105


<210> 6230
<211> 944
<212> PRT
<213> Homo sapiens

<400> 6230
Met Ala Leu Leu Gly Lys Arg Cys Asp Val Pro Thr Asn Gly Cys Gly
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Pro Asp Arg Trp Asn Ser Ala Phe Thr Arg Lys Asp Glu Ile Ile Thr
                20                  25                  30
Ser Leu Val Ser Ala Leu Asp Ser Met Cys Ser Ala Leu Ser Lys Leu
            35                  40                  45
Asn Ala Glu Val Ala Cys Val Ala Val His Asp Glu Ser Ala Phe Val
        50                  55                  60
Val Gly Thr Glu Lys Gly Arg Met Phe Leu Asn Ala Arg Lys Glu Leu
65                  70                  75                  80
Gln Ser Asp Phe Leu Arg Phe Cys Arg Gly Pro Pro Trp Lys Asp Pro
                85                  90                  95
Glu Ala Glu His Pro Lys Lys Val Gln Arg Gly Glu Gly Gly Gly Arg
            100                 105                 110
Ser Leu Pro Arg Ser Ser Leu Glu His Gly Ser Asp Val Tyr Leu Leu
        115                 120                 125
Arg Lys Met Val Glu Glu Val Phe Asp Val Leu Tyr Ser Glu Ala Leu
    130                 135                 140
Gly Arg Ala Ser Val Val Pro Leu Pro Tyr Glu Arg Leu Leu Arg Glu
145                 150                 155                 160
Pro Gly Leu Leu Ala Val Gln Gly Leu Pro Glu Gly Leu Ala Phe Arg
```

5413

```
                    165                 170                 175
Arg Pro Ala Glu Tyr Asp Pro Lys Ala Leu Met Ala Ile Leu Glu His
            180                 185                 190   .
Ser His Arg Ile Arg Phe Lys Leu Lys Arg Pro Leu Glu Asp Gly Gly
        195                 200                 205
Arg Asp Ser Lys Ala Leu Val Glu Leu Asn Gly Val Ser Leu Ile Pro
    210                 215                 220
Lys Gly Ser Arg Asp Cys Gly Leu His Gly Gln Ala Pro Lys Val Pro
225                 230                 235                 240
Pro Gln Asp Leu Pro Pro Thr Ala Thr Ser Ser Ser Met Ala Ser Phe
                245                 250                 255
Leu Tyr Ser Thr Ala Leu Pro Asn His Ala Ile Arg Glu Leu Lys Gln
            260                 265                 270
Glu Ala Pro Ser Cys Pro Leu Ala Pro Ser Asp Leu Gly Leu Ser Arg
        275                 280                 285
Pro Met Pro Glu Pro Lys Ala Thr Gly Ala Gln Asp Phe Ser Asp Cys
    290                 295                 300
Cys Gly Gln Lys Pro Thr Gly Pro Gly Gly Pro Leu Ile Gln Asn Val
305                 310                 315                 320 .
His Ala Ser Lys Arg Ile Leu Phe Ser Ile Val His Asp Lys Ser Glu
                325                 330                 335
Lys Trp Asp Ala Phe Ile Lys Glu Thr Glu Asp Ile Asn Thr Leu Arg
            340                 345                 350
Glu Cys Val Gln Ile Leu Phe Asn Ser Arg Tyr Ala Glu Ala Leu Gly
        355                 360                 365
Leu Gly Asn Met Val Pro Val Pro Tyr Arg Lys Ile Ala Cys Asp Pro
    370                 375                 380
Glu Ala Val Glu Ile Val Gly Ile Pro Asp Lys Ile Pro Phe Lys Arg
385                 390                 395                 400
Pro Cys Thr Tyr Gly Val Pro Lys Leu Lys Arg Ile Leu Glu Glu Arg
                405                 410                 415
His Ser Ile His Phe Ile Ile Lys Arg Met Phe Asp Glu Arg Ile Phe
            420                 425                 430
Thr Gly Asn Lys Phe Thr Lys Asp Thr Thr Lys Leu Glu Pro Ala Ser
        435                 440                 445
Pro Pro Glu Asp Thr Ser Ala Glu Val Ser Arg Ala Thr Val Leu Asp
    450                 455                 460
Leu Ala Gly Asn Ala Arg Ser Asp Lys Gly Ser Met Ser Glu Asp Cys
465                 470                 475                 480
Gly Pro Gly Thr Ser Gly Glu Leu Gly Gly Leu Arg Pro Ile Lys Ile
                485                 490                 495
Glu Pro Glu Asp Leu Asp Ile Ile Gln Val Thr Val Pro Asp Pro Ser
            500                 505                 510
Pro Thr Ser Glu Glu Met Thr Asp Ser Met Pro Gly His Leu Pro Ser
        515                 520                 525
Glu Asp Ser Gly Tyr Gly Met Glu Met Leu Thr Asp Lys Gly Leu Ser
    530                 535                 540
Glu Asp Ala Arg Pro Glu Glu Arg Pro Val Glu Asp Ser His Gly Asp
545                 550                 555                 560
Val Ile Arg Pro Leu Arg Lys Gln Val Glu Leu Leu Phe Asn Thr Arg
                565                 570                 575
Tyr Ala Lys Ala Ile Gly Ile Ser Glu Pro Val Lys Val Pro Tyr Ser
            580                 585                 590
Lys Phe Leu Met His Pro Glu Glu Leu Phe Val Val Gly Leu Pro Glu
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5414

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              595                    600                    605
    Gly Ile Ser Leu Arg Arg Pro Asn Cys Phe Gly Ile Ala Lys Leu Arg
         610                    615                    620
    Lys Ile Leu Glu Ala Ser Asn Ser Ile Gln Phe Val Ile Lys Arg Pro
    625                    630                    635                    640
    Glu Leu Leu Thr Glu Gly Val Lys Glu Pro Ile Val Asp Ser Gln Glu
                   645                    650                    655
    Arg Asp Ser Gly Asp Pro Leu Val Asp Glu Ser Leu Lys Arg Gln Gly
                   660                    665                    670
    Phe Gln Glu Asn Tyr Asp Ala Arg Leu Ser Arg Ile Asp Ile Ala Asn
              675                    680                    685
    Thr Leu Arg Glu Gln Val Gln Asp Leu Phe Asn Lys Lys Tyr Gly Glu
              690                    695                    700
    Ala Leu Gly Ile Lys Tyr Pro Val Gln Val Pro Tyr Lys Arg Ile Lys
    705                    710                    715                    720
    Ser Asn Pro Gly Ser Val Ile Ile Glu Gly Leu Pro Pro Gly Ile Pro
                   725                    730                    735
    Phe Arg Lys Pro Cys Thr Phe Gly Ser Gln Asn Leu Glu Arg Ile Leu
                   740                    745                    750
    Ala Val Ala Asp Lys Ile Lys Phe Thr Val Thr Arg Pro Phe Gln Gly
              755                    760                    765
    Leu Ile Pro Lys Pro Asp Glu Asp Asp Ala Asn Arg Leu Gly Glu Lys
         770                    775                    780
    Val Ile Leu Arg Glu Gln Val Lys Glu Leu Phe Asn Glu Lys Tyr Gly
    785                    790                    795                    800
    Glu Ala Leu Gly Leu Asn Arg Pro Val Leu Val Pro Tyr Lys Leu Ile
                   805                    810                    815
    Arg Asp Ser Pro Asp Ala Val Glu Val Thr Gly Leu Pro Asp Asp Ile
                   820                    825                    830
    Pro Phe Arg Asn Pro Asn Thr Tyr Asp Ile His Arg Leu Glu Lys Ile
              835                    840                    845
    Leu Lys Ala Arg Glu His Val Arg Met Val Ile Ile Asn Gln Leu Gln
         850                    855                    860
    Pro Phe Ala Glu Ile Cys Asn Asp Ala Lys Val Pro Ala Lys Asp Ser
    865                    870                    875                    880
    Ser Ile Pro Lys Arg Lys Arg Lys Arg Val Ser Glu Gly Asn Ser Val
                        885                    890                    895
    Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Asn Pro Asp Ser
                   900                    905                    910
    Val Ala Ser Ala Asn Gln Ile Ser Leu Val Gln Trp Pro Met Tyr Met
              915                    920                    925
    Val Asp Tyr Ala Gly Leu Asn Val Gln Leu Pro Gly Pro Leu Asn Tyr
         930                    935                    940
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<210> 6231
<211> 471
<212> DNA
<213> Homo sapiens

<400> 6231
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60
taccaatgac aggccctact cacagccact gcactccagc ttgggcgaca gaacgaggcc
120

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ttgccttttt aaaaaaaaaa aaaaggctca aaaaaagagt atgctgggcc aaaaatctgg
180
cccctcaggc ctcctgacct ggaggagaaa aaggggcccg aagcccccg ttgcccccat
240
ctccatatgg aatggcacaa cccctcgagg ggaaccccc cctaaccata gttctaaaaa
300
ggggacaaaa aaatgggcgc tggatttttc aacgccggaa acccaattcc caccccctgg
360
ccggccgttc ttagggattc caacttggga cccaacctgg gcgtattctg ggccttactt
420
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471
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<210> 6232
<211> 138
<212> PRT
<213> Homo sapiens

<400> 6232

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Met Ser Thr Asn Asp Arg Pro Tyr Ser Gln Pro Leu His Ser Ser Leu
1               5                   10                  15
Gly Asp Arg Thr Arg Pro Cys Leu Phe Lys Lys Lys Lys Ala Gln
            20                  25                  30
Lys Lys Ser Met Leu Gly Gln Lys Ser Gly Pro Ser Gly Leu Leu Thr
        35                  40                  45
Trp Arg Arg Lys Arg Gly Pro Lys Pro Pro Val Ala Pro Ile Ser Ile
    50                  55                  60
Trp Asn Gly Thr Thr Pro Arg Gly Glu Pro Pro Pro Asn His Ser Ser
65                  70                  75                  80
Lys Lys Gly Thr Lys Lys Trp Ala Leu Asp Phe Ser Thr Pro Glu Thr
                85                  90                  95
Gln Phe Pro Pro Pro Gly Arg Pro Phe Leu Gly Ile Pro Thr Trp Asp
            100                 105                 110
Pro Thr Trp Ala Tyr Ser Gly Pro Tyr Leu Phe Leu Val Gly Ile Gly
        115                 120                 125
Ile Pro Phe Pro Phe Pro Pro Pro Ser Asn
    130                 135
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<210> 6233
<211> 894
<212> DNA
<213> Homo sapiens

<400> 6233

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120
agggaaggag acgattggag tcaactcaat gtgctcaaaa aaagaagagt cggggacctc
180
ctagccagtt acattccaga ggatgaggcg ctgatgcttc gggatggacg ctttgcttgt
240
gccatctgcc cccatcgacc ggtactggac accctggcca tgctgactgc ccaccgtgca
300
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ggcaagaaac atctgtccag cttgcagctt ttctatggca agaagcagcc gggaaaggaa
360
agaaagcaga atccaaaaca tcagaatgaa ttgagaaggg aagaaaccaa agctgaggct
420
cctctgctaa ctcagacacg acttatcacc cagagtgctc tgcacagagc tccccactat
480
aacagttgct gccgccggaa gtacagacca gaagccctg gtccctctgt ctccctttcc
540
cctatgccac cctcagaggt caaactccaa agtgggaaga tcagtaggga acctgaacct
600
gcggctggcc cacaggccga ggagtcagca actgtctcag ccctgcacc catgagcccc
660
acaagaagac gagccctgga ccattatctc acccttcgaa gctctggatg gatcccagat
720
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780
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840
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894

<210> 6234
<211> 230
<212> PRT
<213> Homo sapiens

<400> 6234
Met Ser Phe Lys Arg Glu Gly Asp Asp Trp Ser Gln Leu Asn Val Leu
1   5   10   15
Lys Lys Arg Arg Val Gly Asp Leu Leu Ala Ser Tyr Ile Pro Glu Asp
            20   25   30
Glu Ala Leu Met Leu Arg Asp Gly Arg Phe Ala Cys Ala Ile Cys Pro
        35   40   45
His Arg Pro Val Leu Asp Thr Leu Ala Met Leu Thr Ala His Arg Ala
    50   55   60
Gly Lys Lys His Leu Ser Ser Leu Gln Leu Phe Tyr Gly Lys Lys Gln
65   70   75   80
Pro Gly Lys Glu Arg Lys Gln Asn Pro Lys His Gln Asn Glu Leu Arg
                85   90   95
Arg Glu Glu Thr Lys Ala Glu Ala Pro Leu Leu Thr Gln Thr Arg Leu
            100   105   110
Ile Thr Gln Ser Ala Leu His Arg Ala Pro His Tyr Asn Ser Cys Cys
        115   120   125
Arg Arg Lys Tyr Arg Pro Glu Ala Pro Gly Pro Ser Val Ser Leu Ser
    130   135   140
Pro Met Pro Pro Ser Glu Val Lys Leu Gln Ser Gly Lys Ile Ser Arg
145   150   155   160
Glu Pro Glu Pro Ala Ala Gly Pro Gln Ala Glu Glu Ser Ala Thr Val
                165   170   175
Ser Ala Pro Ala Pro Met Ser Pro Thr Arg Arg Arg Ala Leu Asp His
                180   185   190
Tyr Leu Thr Leu Arg Ser Ser Gly Trp Ile Pro Asp Gly Arg Gly Arg
            195   200   205
Trp Val Lys Asp Glu Asn Val Glu Phe Asp Ser Asp Glu Glu Glu Pro

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        210              215            220
Pro Asp Leu Pro Leu Asp
225              230


<210> 6235
<211> 3427
<212> DNA
<213> Homo sapiens


<400> 6235
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gtccgggact ttccgttcga gctcatcccg gagcccccag agggcggcct gcccgggccc
120
tgggccctgc accgcggccg caagaaggcc acaggcagcc ccgtgtccat cttcgtctat
180
gatgtgaagc ctggcgcgga agagcagacc caggtggcca aagctgcctt caagcgcttc
240
aaaactctac ggcaccccaa catcctggct tacatcgatg gactggagac agaaaaatgc
300
ctccacgtcg tgacagaggc tgtgaccccg ttgggaatat acctcaaggc gagagtggag
360
gctggtggcc tgaaggagct ggagatctcc tggggctac accagatcgt gaaagccctc
420
agcttcctgg tcaacgactg cagcctcatc cacaacaatg tctgcatggc cgccgtgttc
480
gtggaccgag ctggcgagtg gaagcttggg ggcctggact acatgtattc ggcccagggc
540
aacggtgggg gacctccccg caaggggatc cccgagcttg agcagtatga ccccccggag
600
ttggctgaca gcagtggcag agtggtcaga gagaagtggt cagcagacat gtggcgcttg
660
ggctgcctca tttgggaagt cttcaatggg cccctacctc gggcagcagc cctacgcaac
720
cctgggaaga tccccaaaac gctggtgccc cattactgtg agctggtggg agcaaacccc
780
aaagtacgtc ccaacccagc ccgcttcctg cagaactgcc gggcacctgg tggcttcatg
840
agcaaccgct ttgtggagac caacctgttc ctggaggaga ttcagatcaa agagccagcc
900
gagaagcaaa aattcttcca agagctgagc aagagcctgg acgcattccc tgaggatttc
960
tgtcggcaca aggtgctgcc ccagctgctg accgccttcg agttcggcaa tgctggggcc
1020
gttgtcctca cgcccctctt caaggtgggc aagttcctga gcgctgagga gtatcagcag
1080
aagatcatcc ctgtggtggt caagatgttc tcatccactg accgggccat gcgcatccgc
1140
ctcctgcagc agatggagca gttcatccag taccttgacg agccaacagt caacacccag
1200
atcttccccc acgtcgtaca tggcttcctg gacaccaacc ctgccatccg ggagcagacg
1260
gtcaagtcca tgctgctcct ggccccaaag ctgaacgagg ccaacctcaa tgtggagctg
1320
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5418

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atgaagcact ttgcacggct acaggccaag gatgaacagg gccccatccg ctgcaacacc
1380
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1440
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1500
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cctgtgctct gcggtctcac tgtagatcct gagaaatccg tgcgagacca ggccttcaag
1620
gccattcgga gcttcctgtc caaattggag tctgtgtcgg aggacccgac ccagctggag
1680
gaagtggaga aggatgtcca tgcagcctcc agccctggca tgggaggagc cgcagctagc
1740
tgggcaggct gggccgtgac cggggtctcc tcactcacct ccaagctgat ccgttcgcac
1800
ccaaccactg ccccaacaga aaccaacatt ccccaaagac ccacgcctga aggagttcct
1860
gccccagccc ccaccctgt tcctgccacc cctacaacct caggccactg ggagacgcag
1920
gaggaggaca aggacacagc agaggacagc agcactgctg acagatggga cgacgaagac
1980
tggggcagcc tggagcagga ggccgagtct gtgctggccc agcaggacga ctggagcacc
2040
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2100
ccagagtccg actggagcag ctgggaagct gagggctcct gggaacaggg ctggcaggag
2160
ccaagctccc aggagccacc tcctgacggt acacggctgg ccagcgagta taactggggt
2220
ggcccagagt ccagcgacaa gggcgacccc ttcgctaccc tgtctgcacg tcccagcacc
2280
cagccgaggc cagactcttg gggtgaggac aactgggagg gcctcgagac tgacagtcga
2340
caggtcaagg ctgagctggc ccggaagaag cgcgaggagc ggcggcggga gatggaggcc
2400
aaacgcgccg agaggaaggt ggccaagggc cccatgaagc tgggagcccg gaagctggac
2460
tgaaccgtgg cggtggccct tcccggctgc ggagagcccg ccccacagat gtatttattg
2520
tacaaaccat gtgagcccgg ccggcccagc caggccatct cacgtgtaca taatcagagc
2580
cacaataaat tctatttcac acccctgtgt ccgggctcag tctagcccct gggaggcggc
2640
tggggtctgg cgccgcctgc gcagcccgcg cccacgtcag acgtgaacat caatttgctt
2700
cgaaagccaa gggtaaagag gcacgatctg atttatcagt ttctaggaaa caccctctgg
2760
gaggaaggca ggcagcgccc gccggagacc ttacaaccgc ccgctaaccg gggaggggg
2820
ccggtagggg cgcctcgggt ctcaaggcgc cgggagggtc tgcgggccct gaaggtccct
2880
gggtccgagc cacaagtcgg ggcagaagtg aggccgagct cgcggaaatc cctcagtgat
2940
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caccgaggtc tgggccgagg gcggcgtcgg cggcgtcagc ggcggcgctg gggaacgcag
3000

gccccgtgcg ggcggctgcg cgcgaagccg gctttgcaga cgcagcggaa ggagccgctg
3060

gtgttcacgc agcgctcgct cttgcacagc agcccgcgct ggttcagctc tcggcactcg
3120

tcgatatcca cgcagcgggc gcgggaggcg tcgagctgga agccgccggg acactcgcac
3180

acggcgccgc ccggccgcgg cacgcagcgg ccactcacgc agcgacactc gtctgaatcc
3240

tcctctgaac tgtcctcatc tcttgagggc ttcactccca cccaggacca gcacggttgt
3300

gaggaggtgg agcagcccca ccacaagaag gagtgctacc tgaacttcga tgacacagtg
3360

ttctgcgaca gcgtattggc caccaacgtg acccagcagg agtgctgctg ctctctgggg
3420

gccggcc
3427

<210> 6236
<211> 820
<212> PRT
<213> Homo sapiens

<400> 6236
Pro Arg Ala Pro Glu Pro Ala Ala Ala Val Gly Thr Met Trp Phe Phe
1   5   10   15
Ala Arg Asp Pro Val Arg Asp Phe Pro Phe Glu Leu Ile Pro Glu Pro
                20   25   30
Pro Glu Gly Gly Leu Pro Gly Pro Trp Ala Leu His Arg Gly Arg Lys
            35   40   45
Lys Ala Thr Gly Ser Pro Val Ser Ile Phe Val Tyr Asp Val Lys Pro
        50   55   60
Gly Ala Glu Glu Gln Thr Gln Val Ala Lys Ala Ala Phe Lys Arg Phe
65   70   75   80
Lys Thr Leu Arg His Pro Asn Ile Leu Ala Tyr Ile Asp Gly Leu Glu
                85   90   95
Thr Glu Lys Cys Leu His Val Val Thr Glu Ala Val Thr Pro Leu Gly
            100   105   110
Ile Tyr Leu Lys Ala Arg Val Glu Ala Gly Gly Leu Lys Glu Leu Glu
        115   120   125
Ile Ser Trp Gly Leu His Gln Ile Val Lys Ala Leu Ser Phe Leu Val
    130   135   140
Asn Asp Cys Ser Leu Ile His Asn Asn Val Cys Met Ala Ala Val Phe
145   150   155   160
Val Asp Arg Ala Gly Glu Trp Lys Leu Gly Gly Leu Asp Tyr Met Tyr
                165   170   175
Ser Ala Gln Gly Asn Gly Gly Gly Pro Pro Arg Lys Gly Ile Pro Glu
            180   185   190
Leu Glu Gln Tyr Asp Pro Pro Glu Leu Ala Asp Ser Ser Gly Arg Val
        195   200   205
Val Arg Glu Lys Trp Ser Ala Asp Met Trp Arg Leu Gly Cys Leu Ile
    210   215   220
Trp Glu Val Phe Asn Gly Pro Leu Pro Arg Ala Ala Ala Leu Arg Asn

5420

```
225                    230                    235                    240
Pro Gly Lys Ile Pro Lys Thr Leu Val Pro His Tyr Cys Glu Leu Val
                245                    250                    255
Gly Ala Asn Pro Lys Val Arg Pro Asn Pro Ala Arg Phe Leu Gln Asn
                260                    265                    270
Cys Arg Ala Pro Gly Gly Phe Met Ser Asn Arg Phe Val Glu Thr Asn
            275                    280                    285
Leu Phe Leu Glu Glu Ile Gln Ile Lys Glu Pro Ala Glu Lys Gln Lys
    290                    295                    300
Phe Phe Gln Glu Leu Ser Lys Ser Leu Asp Ala Phe Pro Glu Asp Phe
305                    310                    315                    320
Cys Arg His Lys Val Leu Pro Gln Leu Leu Thr Ala Phe Glu Phe Gly
                325                    330                    335
Asn Ala Gly Ala Val Val Leu Thr Pro Leu Phe Lys Val Gly Lys Phe
            340                    345                    350
Leu Ser Ala Glu Glu Tyr Gln Gln Lys Ile Ile Pro Val Val Lys
            355                    360                    365
Met Phe Ser Ser Thr Asp Arg Ala Met Arg Ile Arg Leu Leu Gln Gln
    370                    375                    380
Met Glu Gln Phe Ile Gln Tyr Leu Asp Glu Pro Thr Val Asn Thr Gln
385                    390                    395                    400
Ile Phe Pro His Val Val His Gly Phe Leu Asp Thr Asn Pro Ala Ile
                405                    410                    415
Arg Glu Gln Thr Val Lys Ser Met Leu Leu Leu Ala Pro Lys Leu Asn
            420                    425                    430
Glu Ala Asn Leu Asn Val Glu Leu Met Lys His Phe Ala Arg Leu Gln
            435                    440                    445
Ala Lys Asp Glu Gln Gly Pro Ile Arg Cys Asn Thr Thr Val Cys Leu
    450                    455                    460
Gly Lys Ile Gly Ser Tyr Leu Ser Ala Ser Thr Arg His Arg Val Leu
465                    470                    475                    480
Thr Ser Ala Phe Ser Arg Ala Thr Arg Asp Pro Phe Ala Pro Ser Arg
                485                    490                    495
Val Ala Gly Val Leu Gly Phe Ala Ala Thr His Asn Leu Tyr Ser Met
            500                    505                    510
Asn Asp Cys Ala Gln Lys Ile Leu Pro Val Leu Cys Gly Leu Thr Val
            515                    520                    525
Asp Pro Glu Lys Ser Val Arg Asp Gln Ala Phe Lys Ala Ile Arg Ser
    530                    535                    540
Phe Leu Ser Lys Leu Glu Ser Val Ser Glu Asp Pro Thr Gln Leu Glu
545                    550                    555                    560
Glu Val Glu Lys Asp Val His Ala Ala Ser Ser Pro Gly Met Gly Gly
                565                    570                    575
Ala Ala Ala Ser Trp Ala Gly Trp Ala Val Thr Gly Val Ser Ser Leu
            580                    585                    590
Thr Ser Lys Leu Ile Arg Ser His Pro Thr Thr Ala Pro Thr Glu Thr
            595                    600                    605
Asn Ile Pro Gln Arg Pro Thr Pro Glu Gly Val Pro Ala Pro Ala Pro
    610                    615                    620
Thr Pro Val Pro Ala Thr Pro Thr Thr Ser Gly His Trp Glu Thr Gln
625                    630                    635                    640
Glu Glu Asp Lys Asp Thr Ala Glu Asp Ser Ser Thr Ala Asp Arg Trp
                645                    650                    655
Asp Asp Glu Asp Trp Gly Ser Leu Glu Gln Glu Ala Glu Ser Val Leu
```

5421

```
            660                665                670
Ala Gln Gln Asp Asp Trp Ser Thr Gly Gly Gln Val Ser Arg Ala Ser
        675                680                685
Gln Val Ser Asn Ser Asp His Lys Ser Ser Lys Ser Pro Glu Ser Asp
    690                695                700
Trp Ser Ser Trp Glu Ala Glu Gly Ser Trp Glu Gln Gly Trp Gln Glu
705                710                715                720
Pro Ser Ser Gln Glu Pro Pro Asp Gly Thr Arg Leu Ala Ser Glu
                725                730                735
Tyr Asn Trp Gly Gly Pro Glu Ser Ser Asp Lys Gly Asp Pro Phe Ala
            740                745                750
Thr Leu Ser Ala Arg Pro Ser Thr Gln Pro Arg Pro Asp Ser Trp Gly
        755                760                765
Glu Asp Asn Trp Glu Gly Leu Glu Thr Asp Ser Arg Gln Val Lys Ala
    770                775                780
Glu Leu Ala Arg Lys Lys Arg Glu Glu Arg Arg Arg Glu Met Glu Ala
785                790                795                800
Lys Arg Ala Glu Arg Lys Val Ala Lys Gly Pro Met Lys Leu Gly Ala
             ·  805                810                815
Arg Lys Leu Asp
            820
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<210> 6237
<211> 494
<212> DNA
<213> Homo sapiens

<400> 6237
cggcctggga ccatgggcgg acatgttccc gatttgaggt gaaacatgaa gagaaaatag
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aatacttaat aatgcttttc cgcaaccgct tcttgctgct gctggccctg gctgcgctgc
120
tggcctttgt gagcctcagc ctgcagttct tccacctgat cccggtgtcg actcctaaga
180
atggaatgag tagcaagagt cgaaagagaa tcatgcccga ccctgtgacg gagccccctg
240
tgacagaccc cgtttatgaa gctcttttgt actgcaacat ccccagcgtg gccgagcgca
300
gcatggaagg tcatgccccg catcatttta agctggtctc agtgcatgtg ttcattcgcc
360
acggagacag gtacccactg tatgtcattc ccaaaacaaa gcgaccagaa attgactgca
420
ctctggtggc taacaggaaa ccgtatcacc caaaactgga agctttcatt agtcacatgt
480
tgagaggatc cgga
494
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<210> 6238
<211> 141
<212> PRT
<213> Homo sapiens

<400> 6238
Met Leu Phe Arg Asn Arg Phe Leu Leu Leu Leu Ala Leu Ala Ala Leu
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 1              5                10                15
Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile Pro Val
            20                25                30
Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys Arg Ile Met
            35                40                45
Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro Val Tyr Glu Ala
    50                55                60
Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu Arg Ser Met Glu Gly
65                  70                75                80
His Ala Pro His His Phe Lys Leu Val Ser Val His Val Phe Ile Arg
            85                90                95
His Gly Asp Arg Tyr Pro Leu Tyr Val Ile Pro Lys Thr Lys Arg Pro
            100               105               110
Glu Ile Asp Cys Thr Leu Val Ala Asn Arg Lys Pro Tyr His Pro Lys
            115               120               125
Leu Glu Ala Phe Ile Ser His Met Leu Arg Gly Ser Gly
    130               135               140
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<210> 6239
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6239
nnggcgggtt aaagagcgcg ttgctggctg ggcacgcgtg cttgagaagg ttcaatggcg
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tggcagggac tagcggccga gttcctgcag gtgccggcgg tgacgcgggc ttacaccgca
120
gcctgtgtcc tcaccaccgc cgcggtgcag ctggagctcc tcagcccctt tcaactctac
180
ttcaacccgc accttgtgtt ccggaagttc caggtctgga ggctcgtcac caacttcctc
240
ttcttcgggc ccctgggatt cagcttcttc ttcaacatgc tcttcgtgtt ccgctactgc
300
cgcatgctgg aagagggctc cttccgcggc cgcacggccg acttcgtctt catgtttctc
360
ttcgggggcg tccttatgac cctgctggga ctcctgggca gcctgttctt cctgggccag
420
gccctcatgg ccatgctggt gtacgtgtgg agccgccgca gccctcgggt gagggtcaac
480
ttcttcggcc tgctcacttt ccaggcaccg ttcctgcctt gggcgctcat gggcttctcg
540
ctgctgctgg caactccat cctcgtggac ctgctgggga ttgcggtggg ccatatctac
600
tacttcctgg aggacgtctt ccccaaccag cctggaggca agaggctcct gcagacccct
660
ggcttcctaa agctgctcct ggatgcccct gcagaagacc ccaattacct gcccctccct
720
gaggaacagc caggacccca tctgccaccc ccgcagcagt gaccccacc cagggccagg
780
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840
ccatcctaaa ggctgggccc atgcaagggc ccacctgaat aaacagaatg agctgcaaaa
900
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5423

aaaaaaaaaa a
911

<210> 6240
<211> 235
<212> PRT
<213> Homo sapiens

<400> 6240
Met Ala Trp Gln Gly Leu Ala Ala Glu Phe Leu Gln Val Pro Ala Val
 1   5   10   15
Thr Arg Ala Tyr Thr Ala Ala Cys Val Leu Thr Thr Ala Ala Val Gln
            20   25   30
Leu Glu Leu Leu Ser Pro Phe Gln Leu Tyr Phe Asn Pro His Leu Val
        35   40   45
Phe Arg Lys Phe Gln Val Trp Arg Leu Val Thr Asn Phe Leu Phe Phe
        50   55   60
Gly Pro Leu Gly Phe Ser Phe Phe Phe Asn Met Leu Phe Val Phe Arg
65   70   75   80
Tyr Cys Arg Met Leu Glu Glu Gly Ser Phe Arg Gly Arg Thr Ala Asp
                85   90   95
Phe Val Phe Met Phe Leu Phe Gly Gly Val Leu Met Thr Leu Leu Gly
            100   105   110
Leu Leu Gly Ser Leu Phe Phe Leu Gly Gln Ala Leu Met Ala Met Leu
        115   . 120   125
Val Tyr Val Trp Ser Arg Arg Ser Pro Arg Val Arg Val Asn Phe Phe
        130   135   140
Gly Leu Leu Thr Phe Gln Ala Pro Phe Leu Pro Trp Ala Leu Met Gly
145   150   .   155   160
Phe Ser Leu Leu Leu Gly Asn Ser Ile Leu Val Asp Leu Leu Gly Ile
                165   170   175
Ala Val Gly His Ile Tyr Tyr Phe Leu Glu Asp Val Phe Pro Asn Gln
                180   185   190
Pro Gly Gly Lys Arg Leu Leu Gln Thr Pro Gly Phe Leu Lys Leu Leu
        195   200   205
Leu Asp Ala Pro Ala Glu Asp Pro Asn Tyr Leu Pro Leu Pro Glu Glu
        210   215   220
Gln Pro Gly Pro His Leu Pro Pro Gln Gln
225   230   235

<210> 6241
<211> 1515
<212> DNA
<213> Homo sapiens

<400> 6241
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agcaagagcc aggcggtgga gaagccgccg tcggagaagc cgcggctgag gcgctcgtcg
120
cgccgggccc caggaggagg gccgggggag ccgccgccgc ctgagctggc gttgctcccg
180
ccaccgccgc cgccgccgcc gactcccgcg accccgacgt cctcggcgtc caacctggac
240

5424

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ctgggcgagc agcgggacgc ctgggagacg ttccagaagc ggcagaagct tacctccgag
300
ggtgccgcca agctcctgct agacaccttt gaataccagg gcctggtgaa gcacacagga
360
ggctgccact gtggagcagt tcgtttttgaa gtttgggcct cagcagactt gcatatattt
420
gactgcaatt gcagcatttg caagaagaag cagaatagac acttcattgt tccagcttct
480
cgcttcaagc tcctgaaggg agctgagcac ataacgactt acacgttcaa tactcacaaa
540
gcccagcata ccttctgtaa gagatgtggc gttcagagct tctatactcc acgatcaaac
600
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660
actgaggaat tcaatggcag cgattgggag aaggccatga agagcacaa gaccatcaag
720
aacatgtcta aagagtgagc ttctgcctct cctgccctga aaggaggaa tgattggggc
780
cagcaacttt gctctccctg ccgtgcctcg gtggtgctcc tgaatgtggc tgacctgggc
840
tgctggttcc gttgactagg gtcatcttga tctctgcagt ttgctccagc taccagtttc
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960
ctcttcccaa cttttgtgtg atccagcaga gcatgtgaga ctctttgata tgcaccttca
1020
tgtattatct tgttcagttc tctgaggttg ggatcattat tatttcccat tttgcagatg
1080
agagaattga ggcagagaaa ggttcagcac cttgcctttg gttacacagc tggtcattct
1140
ggcttcaatc gcaggactac cagcctgtgc tcttcaccac ttagcttccc tgactcaggc
1200
cacttccctg gagcgttagc tggattctga gagtagtttc caagccagag ctttcagaga
1260
gcttttgttc gtaggacaat tttaagacat caggttcttg aatgttttgt gttttttttaa
1320
gtctcagatt tatcttccta cttcctactt ctccaaaaag actgagagct gacatatttg
1380
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1440
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1500
ctagacccac attct
1515
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<210> 6242
<211> 245
<212> PRT
<213> Homo sapiens

<400> 6242
Cys Gly Arg Cys Leu Gly Pro Ser Ala Thr Arg Thr Arg Arg Ser Ala
 1   5   10   15
Ser Gln Ala Gly Ser Lys Ser Gln Ala Val Glu Lys Pro Pro Ser Glu

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                 20                    25                    30
Lys Pro Arg Leu Arg Arg Ser Ser Arg Arg Ala Pro Gly Gly Gly Pro
             35                    40                    45
Gly Glu Pro Pro Pro Pro Glu Leu Ala Leu Leu Pro Pro Pro Pro Pro
             50                    55                    60
Pro Pro Pro Thr Pro Ala Thr Pro Thr Ser Ser Ala Ser Asn Leu Asp
65                    70                    75                    80
Leu Gly Glu Gln Arg Asp Ala Trp Glu Thr Phe Gln Lys Arg Gln Lys
                 85                    90                    95
Leu Thr Ser Glu Gly Ala Ala Lys Leu Leu Leu Asp Thr Phe Glu Tyr
             100                   105                   110
Gln Gly Leu Val Lys His Thr Gly Gly Cys His Cys Gly Ala Val Arg
             115                   120                   125
Phe Glu Val Trp Ala Ser Ala Asp Leu His Ile Phe Asp Cys Asn Cys
             130                   135                   140
Ser Ile Cys Lys Lys Lys Gln Asn Arg His Phe Ile Val Pro Ala Ser
145                   150                   155                   160
Arg Phe Lys Leu Leu Lys Gly Ala Glu His Ile Thr Thr Tyr Thr Phe
                 165                   170                   175
Asn Thr His Lys Ala Gln His Thr Phe Cys Lys Arg Cys Gly Val Gln
             180                   185                   190
Ser Phe Tyr Thr Pro Arg Ser Asn Pro Gly Gly Phe Gly Ile Ala Pro
             195                   200                   205
His Cys Leu Asp Glu Gly Thr Val Arg Ser Met Val Thr Glu Glu Phe
             210                   215                   220
Asn Gly Ser Asp Trp Glu Lys Ala Met Lys Glu His Lys Thr Ile Lys
225                   230                   235                   240
Asn Met Ser Lys Glu
                 245
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<210> 6243
<211> 326
<212> DNA
<213> Homo sapiens

<400> 6243
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120
tctgagacca gagggacaaa ccataatgag tgaagagatg aggacattct taaagtggag
180
ctagcaaagc tgggaatggc cttccacaag aggaaaccta agactggacc cagaatagta
240
aaggtgggtt tggggacttg aggcaagtga gaaagctctg gaaatgccgc tggataaatt
300
ctgtagggat gcattcctgg agagtg
326

<210> 6244
<211> 104
<212> PRT
<213> Homo sapiens

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<400> 6244
Met His Pro Tyr Arg Ile Tyr Pro Ala Ala Phe Pro Glu Leu Ser His
1               5                   10                  15
Leu Pro Gln Val Pro Lys Pro Thr Phe Thr Ile Leu Gly Pro Val Leu
            20                  25                  30
Gly Phe Leu Leu Trp Lys Ala Ile Pro Ser Phe Ala Ser Ser Thr Leu
        35                  40                  45
Arg Met Ser Ser Ser Leu His Ser Leu Trp Phe Val Pro Leu Val Ser
        50                  55                  60
Glu Glu Glu Val Leu Ile Ile Leu Ser Gly Ser Glu Cys Ser Thr Cys
65                  70                  75                  80
Pro Tyr Val Leu Ser Tyr Pro Thr Ser Ser Leu Thr Leu Phe His Gln
                85                  90                  95
Phe Leu Ser Phe Ser Pro Trp Arg
            100
```

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<210> 6245
<211> 6609
<212> DNA
<213> Homo sapiens
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<400> 6245
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aagttcttgg ttcaagtcaa cctgttactt gccattggat ggtaatattt gacttttcaa
120
tcttatcctg attgataagc ggactcccag tttttgcctt ctctttgccc cagaatttgg
180
agacctcggg cctctcccct gctttctcc tcttтcctag attttctcaa gtgtccccgt
240
ttagtcttcc ctcctcagct tggctcctga gaacatttgc tgctgctttt gttttтgtag
300
gtgttggaca atcagataaa gaaagacctg gctgacaagg agacactgga gaacatgatg
360
cagagacacg aggaggaggc ccatgagaag ggcaaaattc tcagcgaaca gaaggcgatg
420
atcaatgcta tggattccaa gatcagatcc ctggaacaga ggattgtgga actgtctgaa
480
gccaataaac ttgcagcaaa tagcagtctt tttacccaaa ggaacatgaa ggcccaagaa
540
gagatgattt ctgaactcag gcaacagaaa tttтacctgg agacacaggc tgggaagttg
600
gaggcccaga accgaaaact ggaggagcag ctggagaaga tcagccacca agaccacagt
660
gacaagaatc ggctgctgga actggagaca agattgcggg aggtcagtct agagcacgag
720
gagcagaaac tggagctcaa gcgccagctc acagagctac agctctccct gcaggagcgc
780
gagtcacagt tgacagccct gcaggctgca cgggcggccc tggagagcca gcttcgccag
840
gcgaagacag agctggaaga gaccacagca gaagctgaag aggagatcca ggcactcacg
900
gcacatagag atgaaatcca gcgcaaattt gatgctcttc gtaacagctg tactgtaatc
960
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acagacctgg aggagcagct aaaccagctg accgaggaca acgctgaact caacaaccaa
1020
aacttctact tgtccaaaca actcgatgag gcttctggcg ccaacgacga gattgtacaa
1080
ctgcgaagtg aagtggacca tctccgccgg gagatcacgg aacgagagat gcagcttacc
1140
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1200
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1260
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1320
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1680
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1860
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1920
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2160
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2280
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2520
gccagagaag ctggacagag gccggtggaa gaatttgagc tgtgccttcc cgacgggggat
2580
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5428

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gtatctattc atggtgccgt tggtgcttcc gaactcgcaa atacagccaa agcagatgtc
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2700
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2760
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4200
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5429

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5820
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5430

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6240
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aaaaaaaaa
6609


<210> 6246
<211> 1286
<212> PRT
<213> Homo sapiens


<400> 6246
Val Leu Asp Asn Gln Ile Lys Lys Asp Leu Ala Asp Lys Glu Thr Leu
1               5                   10                  15
Glu Asn Met Met Gln Arg His Glu Glu Glu Ala His Glu Lys Gly Lys
                20                  25                  30
Ile Leu Ser Glu Gln Lys Ala Met Ile Asn Ala Met Asp Ser Lys Ile
            35                  40                  45
Arg Ser Leu Glu Gln Arg Ile Val Glu Leu Ser Glu Ala Asn Lys Leu
        50                  55                  60
Ala Ala Asn Ser Ser Leu Phe Thr Gln Arg Asn Met Lys Ala Gln Glu
65                  70                  75                  80
Glu Met Ile Ser Glu Leu Arg Gln Gln Lys Phe Tyr Leu Glu Thr Gln
                85                  90                  95
Ala Gly Lys Leu Glu Ala Gln Asn Arg Lys Leu Glu Glu Gln Leu Glu
                100                 105                 110
Lys Ile Ser His Gln Asp His Ser Asp Lys Asn Arg Leu Leu Glu Leu
            115                 120                 125
Glu Thr Arg Leu Arg Glu Val Ser Leu Glu His Glu Glu Gln Lys Leu
        130                 135                 140
Glu Leu Lys Arg Gln Leu Thr Glu Leu Gln Leu Ser Leu Gln Glu Arg
```

5431

```
145                    150                    155                    160
Glu Ser Gln Leu Thr Ala Leu Gln Ala Ala Arg Ala Ala Leu Glu Ser
                     165                    170                    175
Gln Leu Arg Gln Ala Lys Thr Glu Leu Glu Glu Thr Thr Ala Glu Ala
             180                    185                    190
Glu Glu Glu Ile Gln Ala Leu Thr Ala His Arg Asp Glu Ile Gln Arg
             195                    200                    205
Lys Phe Asp Ala Leu Arg Asn Ser Cys Thr Val Ile Thr Asp Leu Glu
     210                    215                    220
Glu Gln Leu Asn Gln Leu Thr Glu Asp Asn Ala Glu Leu Asn Asn Gln
225                    230                    235                    240
Asn Phe Tyr Leu Ser Lys Gln Leu Asp Glu Ala Ser Gly Ala Asn Asp
                 245                    250                    255
Glu Ile Val Gln Leu Arg Ser Glu Val Asp His Leu Arg Arg Glu Ile
             260                    265                    270
Thr Glu Arg Glu Met Gln Leu Thr Ser Gln Lys Gln Thr Met Glu Ala
             275                    280                    285
Leu Lys Thr Thr Cys Thr Met Leu Glu Glu Gln Val Met Asp Leu Glu
     290                    295                    300
Ala Leu Asn Asp Glu Leu Leu Glu Lys Glu Arg Gln Trp Glu Ala Trp
305                    310                    315                    320
Arg Ser Val Leu Gly Asp Glu Lys Ser Gln Phe Glu Cys Arg Val Arg
                 325                    330                    335
Glu Leu Gln Arg Met Leu Asp Thr Glu Lys Gln Ser Arg Ala Arg Ala
             340                    345                    350
Asp Gln Arg Ile Thr Glu Ser Arg Gln Val Val Glu Leu Ala Val Lys
         355                    360                    365
Glu His Lys Ala Glu Ile Leu Ala Leu Gln Gln Ala Leu Lys Glu Gln
     370                    375                    380
Lys Leu Lys Ala Glu Ser Leu Ser Asp Lys Leu Asn Asp Leu Glu Lys
385                    390                    395  ·                400
Lys His Ala Met Leu Glu Met Asn Ala Arg Ser Leu Gln Gln Lys Leu
                 405                    410                    415
Glu Thr Glu Arg Glu Leu Lys Gln Arg Leu Leu Glu Glu Gln Ala Lys
             420                    425                    430
Leu Gln Gln Gln Met Asp Leu Gln Lys Asn His Ile Phe Arg Leu Thr
         435                    440                    445
Gln Gly Leu Gln Glu Ala Leu Asp Arg Ala Asp Leu Leu Lys Thr Glu
     450                    455                    460
Arg Ser Asp Leu Glu Tyr Gln Leu Glu Asn Ile Gln Val Leu Tyr Ser
465                    470                    475                    480
His Glu Lys Val Lys Met Glu Gly Thr Ile Ser Gln Gln Thr Lys Leu
                 485                    490                    495
Ile Asp Phe Leu Gln Ala Lys Met Asp Gln Pro Ala Lys Lys Lys Lys
             500                    505                    510
Val Pro Leu Gln Tyr Asn Glu Leu Lys Leu Ala Leu Glu Lys Glu Lys
         515                    520                    525
Ala Arg Cys Ala Glu Leu Glu Glu Ala Leu Gln Lys Thr Arg Ile Glu
     530                    535                    540
Leu Arg Ser Ala Arg Glu Glu Ala Ala His Arg Lys Ala Thr Asp His
545                    550                    555                    560
Pro His Pro Ser Thr Pro Ala Thr Ala Arg Gln Gln Ile Ala Met Ser
                 565                    570                    575
Ala Ile Val Arg Ser Pro Glu His Gln Pro Ser Ala Met Ser Leu Leu
```

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                    580                   585                   590
Ala Pro Pro Ser Ser Arg Arg Lys Glu Ser Ser Thr Pro Glu Glu Phe
        595                   600                   605
Ser Arg Arg Leu Lys Glu Arg Met His His Asn Ile Pro His Arg Phe
    610                   615                   620
Asn Val Gly Leu Asn Met Arg Ala Thr Lys Cys Ala Val Cys Leu Asp
625                   630                   635                   640
Thr Val His Phe Gly Arg Gln Ala Ser Lys Cys Leu Glu Cys Gln Val
            645                   650                   655
Met Cys His Pro Lys Cys Ser Thr Cys Leu Pro Ala Thr Cys Gly Leu
        660                   665                   670
Pro Ala Glu Tyr Ala Thr His Phe Thr Glu Ala Phe Cys Arg Asp Lys
        675                   680                   685
Met Asn Ser Pro Gly Leu Gln Thr Lys Glu Pro Ser Ser Ser Leu His
    690                   695                   700
Leu Glu Gly Trp Met Lys Val Pro Arg Asn Asn Lys Arg Gly Gln Gln
705                   710                   715                   720
Gly Trp Asp Arg Lys Tyr Ile Val Leu Glu Gly Ser Lys Val Leu Ile
            725                   730                   735
Tyr Asp Asn Glu Ala Arg Glu Ala Gly Gln Arg Pro Val Glu Glu Phe
            740                   745                   750
Glu Leu Cys Leu Pro Asp Gly Asp Val Ser Ile His Gly Ala Val Gly
        755                   760                   765
Ala Ser Glu Leu Ala Asn Thr Ala Lys Ala Asp Val Pro Tyr Ile Leu
    770                   775                   780
Lys Met Glu Ser His Pro His Thr Thr Cys Trp Pro Gly Arg Thr Leu
785                   790                   795                   800
Tyr Leu Leu Ala Pro Ser Phe Pro Asp Lys Gln Arg Trp Val Thr Ala
            805                   810                   815
Leu Glu Ser Val Val Ala Gly Gly Arg Val Ser Arg Glu Lys Ala Glu
        820                   825                   830
Ala Asp Ala Lys Leu Leu Gly Asn Ser Leu Leu Lys Leu Glu Gly Asp
        835                   840                   845
Asp Arg Leu Asp Met Asn Cys Thr Leu Pro Phe Ser Asp Gln Val Val
    850                   855                   860
Leu Val Gly Thr Glu Glu Gly Leu Tyr Ala Leu Asn Val Leu Lys Asn
865                   870                   875                   880
Ser Leu Thr His Val Pro Gly Ile Gly Ala Val Phe Gln Ile Tyr Ile
            885                   890                   895
Ile Lys Asp Leu Glu Lys Leu Leu Met Ile Ala Gly Glu Glu Arg Ala
        900                   905                   910
Leu Cys Leu Val Asp Val Lys Lys Val Lys Gln Ser Leu Ala Gln Ser
        915                   920                   925
His Leu Pro Ala Gln Pro Asp Ile Ser Pro Asn Ile Phe Glu Ala Val
    930                   935                   940
Lys Gly Cys His Leu Phe Gly Ala Gly Lys Ile Glu Asn Gly Leu Cys
945                   950                   955                   960
Ile Cys Ala Ala Met Pro Ser Lys Val Val Ile Leu Arg Tyr Asn Glu
            965                   970                   975
Asn Leu Ser Lys Tyr Cys Ile Arg Lys Glu Ile Glu Thr Ser Glu Pro
        980                   985                   990
Cys Ser Cys Ile His Phe Thr Asn Tyr Ser Ile Leu Ile Gly Thr Asn
    995                   1000                  1005
Lys Phe Tyr Glu Ile Asp Met Lys Gln Tyr Thr Leu Glu Glu Phe Leu
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Asp Lys Asn Asp His Ser Leu Ala Pro Ala Val Phe Ala Ala Ser Ser
1025                1030                1035                1040
Asn Ser Phe Pro Val Ser Ile Val Gln Val Asn Ser Ala Gly Gln Arg
                    1045                1050                1055
Glu Glu Tyr Leu Leu Cys Phe His Glu Phe Gly Val Phe Val Asp Ser
                1060                1065                1070
Tyr Gly Arg Arg Ser Arg Thr Asp Asp Leu Lys Trp Ser Arg Leu Pro
            1075                1080                1085
Leu Ala Phe Ala Tyr Arg Glu Pro Tyr Leu Phe Val Thr His Phe Asn
        1090                1095                1100
Ser Leu Glu Val Ile Glu Ile Gln Ala Arg Ser Ser Ala Gly Thr Pro
1105                1110                1115                1120
Ala Arg Ala Tyr Leu Asp Ile Pro Asn Pro Arg Tyr Leu Gly Pro Ala
                1125                1130                1135
Ile Ser Ser Gly Ala Ile Tyr Leu Ala Ser Ser Tyr Gln Asp Lys Leu
            1140                1145                1150
Arg Val Ile Cys Cys Lys Gly Asn Leu Val Lys Glu Ser Gly Thr Glu
        1155                1160                1165
His His Arg Gly Pro Ser Thr Ser Arg Ser Ser Pro Asn Lys Arg Gly
    1170                1175                1180
Pro Pro Thr Tyr Asn Glu His Ile Thr Lys Arg Val Ala Ser Ser Pro
1185                1190                1195                1200
Ala Pro Pro Glu Gly Pro Ser His Pro Arg Glu Pro Ser Thr Pro His
                1205                1210                1215
Arg Tyr Arg Glu Gly Arg Thr Glu Leu Arg Arg Asp Lys Ser Pro Gly
                1220                1225                1230
Arg Pro Leu Glu Arg Glu Lys Ser Pro Gly Arg Met Leu Ser Thr Arg
            1235                1240                1245
Arg Glu Arg Ser Pro Gly Arg Leu Phe Glu Asp Ser Ser Arg Gly Arg
        1250                1255                1260
Leu Pro Ala Gly Ala Val Arg Thr Pro Leu Ser Gln Val Asn Lys Val
1265                1270                1275                1280
Trp Asp Gln Ser Ser Val
                1285
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<211> 497
<212> DNA
<213> Homo sapiens

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120
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caacccatgt ctatcgttat cacagaggcg agtcgaagct gcacatgtgc ttggacatag
300
ggaatggtca gagaaaagac agaaaaaaga catcccttgg tcctggaggc agctatcaaa
360
```

5434

tatcagagca tgctccagag gcatcccagc ctgtgagtac ggaactgctt acgcactggg
420
tttcaccacc gttgcaactc catgaaccag ttgacatggt tcttagaggg ctatttgaat
480
tgagtctata gtatttt
497

<210> 6248
<211> 142
<212> PRT
<213> Homo sapiens

<400> 6248
Met Gly Trp Thr Asp Val Pro Cys Ser Val His Lys Ala Gly Ser Arg
1   5   10   15
Ser Ala Gly Glu Gly Gln Glu Glu Gly Gly Leu Ala Cys Pro Gly
            20   25   30
Ala Ser Gln Arg Leu His Gly Gly Pro Cys Pro Gly Gly Ala Pro Pro
        35   40   45
Arg Glu Thr Ala Gly Ser Arg Pro Ala Ala Arg Ser Pro Gly Arg Glu
    50   55   60
Ile Leu Phe Ile Cys Ala Arg Gly Arg Arg Gly Asn Pro Cys Leu Ser
65   70   75   80
Leu Ser Gln Arg Arg Val Glu Ala Ala His Val Leu Gly His Arg Glu
                85   90   95
Trp Ser Glu Lys Arg Gln Lys Lys Asp Ile Pro Trp Ser Trp Arg Gln
            100   105   110
Leu Ser Asn Ile Arg Ala Cys Ser Arg Gly Ile Pro Ala Cys Glu Tyr
        115   120   125
Gly Thr Ala Tyr Ala Leu Gly Phe Thr Thr Val Ala Thr Pro
    130   135   140

<210> 6249
<211> 1217
<212> DNA
<213> Homo sapiens

<400> 6249
nntgagcaac aaaccgagtt ctggagaacg ccatcagctc gctgcttaaa ctggaaacaa
60
aagtctcaac ttccaacctc tttgcagcta ggagtggcca agtagcatag atctggtgaa
120
tgaactgcag gtgggaattt ctgagaaggt ttccttctta aatagaaaga ttaaaccaca
180
ggttccatta tgggtcgact tgatgggaaa gtcatcatcc tgacggccgc tgctcagggg
240
attggccaag cagctgcctt agcttttgca agagaaggtg ccaaagtcat agccacagac
300
attaatgagt ccaaacttca ggaactggaa aagtacccgg gtattcaaac tcgtgtcctt
360
gatgtcacaa agaagaaaca aattgatcag tttgccaatg aagttgagag acttgatgtt
420
ctctttaatg ttgctggttt tgtccatcat ggaactgtcc tggattgtga ggagaaagac
480

```
tgggacttct cgatgaatct caatgtgcgc agcatgtacc tgatgatcaa ggcattcctt
540
cctaaaatgc ttgctcagaa atctggcaat attatcaaca tgtcttctgt ggcttccagc
600
gtcaaaggag ttgtgaacag atgtgtgtac agcacaacca aggcagccgt gattggcctc
660
acaaaatctg tggctgcaga tttcatccag cagggcatca ggtgcaactg tgtgtgccca
720
ggaacagttg atacgccatc tctacaagaa agaatacaag ccagaggaaa tcctgaagag
780
gcacggaatg atttcctgaa gagacaaaag acgggaagat tcgcaactgc agaagaaata
840
gccatgctct gcgtgtattt ggcttctgat gaatctgctt atgtaactgg taaccctgtc
900
atcattgatg gaggctggag cttgtgattt taggatctcc atggtgggaa ggaaggcagg
960
cccttcctat ccacagtgaa cctggttacg aagaaaactc accaatcatc tccttcctgt
1020
taatcacatg ttaatgaaaa taagctcttt ttaatgatgt cactgtttgc aagagtctga
1080
ttctttaagt atattaatct ctttgtaatc tcttctgaaa tcattgtaaa gaaataaaaa
1140
tattgaactc atagcaggag aatagttttt aaaataaatc tcgatttgtt agcaaaaaaa
1200
aaaaaaaaaa aaaaaaa
1217
```

<210> 6250
<211> 245
<212> PRT
<213> Homo sapiens

<400> 6250

```
Met Gly Arg Leu Asp Gly Lys Val Ile Ile Leu Thr Ala Ala Ala Gln
1               5                   10                  15
Gly Ile Gly Gln Ala Ala Ala Leu Ala Phe Ala Arg Glu Gly Ala Lys
                20                  25                  30
Val Ile Ala Thr Asp Ile Asn Glu Ser Lys Leu Gln Glu Leu Glu Lys
                35                  40                  45
Tyr Pro Gly Ile Gln Thr Arg Val Leu Asp Val Thr Lys Lys Lys Gln
        50                  55                  60
Ile Asp Gln Phe Ala Asn Glu Val Glu Arg Leu Asp Val Leu Phe Asn
65                  70                  75                  80
Val Ala Gly Phe Val His His Gly Thr Val Leu Asp Cys Glu Glu Lys
                85                  90                  95
Asp Trp Asp Phe Ser Met Asn Leu Asn Val Arg Ser Met Tyr Leu Met
                100                 105                 110
Ile Lys Ala Phe Leu Pro Lys Met Leu Ala Gln Lys Ser Gly Asn Ile
        115                 120  .                126
Ile Asn Met Ser Ser Val Ala Ser Ser Val Lys Gly Val Val Asn Arg
        130                 135                 140
Cys Val Tyr Ser Thr Thr Lys Ala Ala Val Ile Gly Leu Thr Lys Ser
145                 150                 155                 160 ·
Val Ala Ala Asp Phe Ile Gln Gln Gly Ile Arg Cys Asn Cys Val Cys
```

5436

```
                    165                   170                   175
Pro Gly Thr Val Asp Thr Pro Ser Leu Gln Glu Arg Ile Gln Ala Arg
            180                   185                   190
Gly Asn Pro Glu Glu Ala Arg Asn Asp Phe Leu Lys Arg Gln Lys Thr
            195                   200                   205
Gly Arg Phe Ala Thr Ala Glu Glu Ile Ala Met Leu Cys Val Tyr Leu
    210                   215                   220
Ala Ser Asp Glu Ser Ala Tyr Val Thr Gly Asn Pro Val Ile Ile Asp
225                   230                   235                   240
Gly Gly Trp Ser Leu
                245
```

```
<210> 6251
<211> 1611
<212> DNA
<213> Homo sapiens
```

```
<400> 6251
tttttttttt tttttttttt tttttttttt tttttttttt ttttccagat caggaagttt
60
tattgctgac atgcaggaag agtccccatg tagtacaaaa atatgtcttt atacaaactt
120
ttttgtgact ttttccgttt ctttacaata ggacttctct cagtgtgtga cacccagtga
180
gggctgaccc atcctcctct cctttgcttc accaggaatg tcatcagaca catggcttga
240
ccttggaagg gcccagtctg tctgacaggg ctttgcagac ccggcggcta ttgctttgaa
300
aaggaggaga aagaccacgc acgggcagca gcctggaggg acccggtggg ctgctgagag
360
ggggctccgc tgcgacgggc cctggcccag cttcaggccc tcacaggagg acagtcaagg
420
gctgggagcc ctaggccgga ctgcatttcc gctcccgcag gagactttct atgaaataaa
480
tatagaaaag agggcatccc ccagccccac agcacaagac cctggccctc agcgctggac
540
agctgagaca gacgcaggct cgctgctcag ggggagtaag tgctgggctc cagtaggctc
600
ccacaggccc actgaggcag aggcatgagt cgcccaagtg ctggatgggg catggggaga
660
aaggggcgtg ggcagccctg ctactgctgg caagaggtgg ccccattttt tccagatggg
720
gaaactgagg cacaaggagg tttgggaact tgcccaaggt cactcacagt gagtcagctt
780
tttaggggga ggagagcggc tcacactctg ggaaacacag tcacctcccc actggggagc
840
agggccaggc aggaggggcc tcaggcccca tgactgcctg gaggggacac tcagcctctc
900
tgaggacata tggggggtag gcctctgggg aagggtcttt gcttggcatc aggcagggcc
960
aagtccagta agggcaaggg gaggggggcat tctggtgaga acagcatttc tggcaagacg
1020
ggcatccact tcaaaatctc ggctcaaaag ggcagcaggg ctgttctcaa gccaggcagg
1080
```

5437

cagggtcccc caatccctac aattctcctg agtccctcac caccatggag gacccttgct
1140

agggtctacc gggagagtca ccacatctat tatgaggcaa gggcactggg atatgttccc
1200

accatcccct aaacacaaga gtaggctagg ggagcgtgca ggcagccccc gctcacggcc
1260

aggcctgcag cccaacccat gggccccttc gcactgggag tccacgtgag ctcagtacca
1320

cggggaagga tagagaaggg aacaggttaa cgcgcgtgta cagcacctca gagaagccac
1380

tgagacggga gagaaagagc caggtctaga aaggcctccc atcaccggca gcagagaggg
1440

actggtgggc tgaaagggga cagggactgg caggaggggc ttccctgcct gggggtgagg
1500

agggagctca cgtgtgggct gtggattcct tgctgtccag ccaggctggg ggcagggagt
1560

ggccatggac tgagccacct agagatggga gagaagttgg tatgggtaan a
1611

<210> 6252
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6252
Met Gly Gly Arg Pro Leu Gly Lys Gly Leu Cys Leu Ala Ser Gly Arg
1   5   10   15
Ala Lys Ser Ser Lys Gly Lys Gly Arg Gly His Ser Gly Glu Asn Ser
            20   25   30
Ile Ser Gly Lys Thr Gly Ile His Phe Lys Ile Ser Ala Gln Lys Gly
            35   40   45
Ser Arg Ala Val Leu Lys Pro Gly Arg Gln Gly Pro Pro Ile Pro Thr
        50   55   60
Ile Leu Leu Ser Pro Ser Pro Pro Trp Arg Thr Leu Ala Arg Val Tyr
65   70   75   80
Arg Glu Ser His His Ile Tyr Tyr Glu Ala Arg Ala Leu Gly Tyr Val
                85   90   95
Pro Thr Ile Pro
                100

<210> 6253
<211> 1953
<212> DNA
<213> Homo sapiens

<400> 6253
nngtggggta gcgggcaagg cgggcgccga gtttgcaaag gctcgcagcg gccagaaacc
60

cggctccgag cggcggcggc ccggcttccg ctgcccgtga gctaaggacg gtccgctccc
120

tctagccagc tccgaatcct gatccaggcg ggggccaggg gcccctcgcc tcccctctga
180

ggaccgaaga tgagcttcct cttcagcagc cgctcttcta aaacattcaa accaaagaag
240

5438

```
aatatccctg aaggatctca tcagtatgaa ctcttaaaac atgcagaagc aactctagga
300
agtgggaatc tgagacaagc tgttatgttg cctgagggag aggatctcaa tgaatggatt
360
gctgtgaaca ctgtggattt ctttaaccag atcaacatgt tatatggaac tattacagaa
420
ttctgcactg aagcaagctg tccagtcatg tctgcaggtc cgagatatga atatcactgg
480
gcagatggta ctaatattaa aaagccaatc aaatgttctg caccaaaata cattgactat
540
ttgatgactt gggttcaaga tcagcttgat gatgaaactc tttttccttc taagattggt
600
gtcccatttc ccaaaaactt tatgtctgtg gcaaagacta ttctaaagcg tctgttcagg
660
gtttatgccc atatttatca ccagcacttt gattctgtga tgcagctgca agaggaggcc
720
cacctcaaca cctcctttaa gcactttatt ttctttgttc aggagtttaa tctgattgat
780
aggcgtgagc tggcacctct tcaagaatta atagagaaac ttggatcaaa agacagataa
840
atgtttcttc tagaacacag ttaccccctt gcttcatcta ttgctagaac tatctcattg
900
ctatctgtta tagactagtg atacaaactt taagaaaaca ggataaaaag atacccattg
960
cctgtgtcta ctgataaaat tatcccaaag gtaggttggt gtgatagttt ccgagtaaga
1020
ccttaaggac acagccaaat cttaagtact gtgtgaccac tcttgttgtt atcacatagt
1080
catacttggt tgtaatatgt gatggttaac ctgtagctta taaatttact tattattctt
1140
ttactcattt actcagtcat ttctttacaa gaaaatgatt gaatctgttt taggtgacag
1200
cacaatggac attaagaatt tccatcaata atttatgaat aagtttccag aacaaatttc
1260
ctaataacac aatcagattg gttttattct tttattttac gaataaaaaa tgtatttttc
1320
agtaccttg agatttagaa catctgtgtc acttcagata acattttagt ttcaagtttg
1380
tatggtagtg tttttataga taagatacgt ctatttttc aaaattcatg attgcagttt
1440
aaatcatcat atgacgtgtg ggtgggagca accaaagtta ttttacagg gactttattt
1500
tttgatcttt atttgagatt gtttcatat ctatctaaat tattaggagt gtgtgtatca
1560
gaagtaattt tttaatgtct tctaaggatg gtcttccagg ctttaaact gaaaagctta
1620
attcagatag tagctttgg ctgagaaaag gaatccaaaa tattaataaa tttagatctc
1680
aaaaccacta tttttattat ttcattattt ttcagaggcc ttaaaattct gggtaagaga
1740
atggaggaaa atactcagag tacttgatta ttttatttcc ttttattaaa aaattacttc
1800
tatgttttta ttgtctcttg agccttagtt aagagtagtg tagaaatgca tgaacttcat
1860
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5439

cctaataagg ataaaactta aggaaaacca caataaacca tgaaggtgta cacatcttaa
1920
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
1953

<210> 6254
<211> 216
<212> PRT
<213> Homo sapiens

<400> 6254
Met Ser Phe Leu Phe Ser Ser Arg Ser Ser Lys Thr Phe Lys Pro Lys
1   5   10   15
Lys Asn Ile Pro Glu Gly Ser His Gln Tyr Glu Leu Leu Lys His Ala
                20   25   30
Glu Ala Thr Leu Gly Ser Gly Asn Leu Arg Gln Ala Val Met Leu Pro
            35   40   45
Glu Gly Glu Asp Leu Asn Glu Trp Ile Ala Val Asn Thr Val Asp Phe
        50   55   60
Phe Asn Gln Ile Asn Met Leu Tyr Gly Thr Ile Thr Glu Phe Cys Thr
65   70   75   80
Glu Ala Ser Cys Pro Val Met Ser Ala Gly Pro Arg Tyr Glu Tyr His
                85   90   95
Trp Ala Asp Gly Thr Asn Ile Lys Lys Pro Ile Lys Cys Ser Ala Pro
            100   105   110
Lys Tyr Ile Asp Tyr Leu Met Thr Trp Val Gln Asp Gln Leu Asp Asp
        115   120   125
Glu Thr Leu Phe Pro Ser Lys Ile Gly Val Pro Phe Pro Lys Asn Phe
    130   135   140
Met Ser Val Ala Lys Thr Ile Leu Lys Arg Leu Phe Arg Val Tyr Ala
145   150   155   160
His Ile Tyr His Gln His Phe Asp Ser Val Met Gln Leu Gln Glu Glu
                165   170   175
Ala His Leu Asn Thr Ser Phe Lys His Phe Ile Phe Phe Val Gln Glu
            180   185   190
Phe Asn Leu Ile Asp Arg Arg Glu Leu Ala Pro Leu Gln Glu Leu Ile
        195   200   205
Glu Lys Leu Gly Ser Lys Asp Arg
    210   215

<210> 6255
<211> 622
<212> DNA
<213> Homo sapiens

<400> 6255
nntccggagg ctgagacagg agaatcgctt gaacccagga ggccgaggtt gcagtgagcc
60
gagatcatgc cattgcactc cagcctgggc aacagagtga gacttcatct caaaaaaaaa
120
aaagccacag tggctgcctt cacagccagc gagggccacg cacatcccag ggtagtggag
180
ctacccaaga cggatgaggg cctaggcttc aacatcatgg gtggcaaaga gcaaaactcg
240

5440

cccatctaca tctcccgggt catcccaggg ggtgtggctg accgccatgg aggcctcaag
300
cgtggggatc aactgttgtc ggtgaacggt gtgagcgttg agggtgagca gcatgagaag
360
gcggtggagc tgctgaaggc ggcccagggc tcggtgaagc tggttgtccg ttacacaccg
420
cgagtgctgg aggagatgga ggcccggttc gagaagatgc gctctgcccg ccggcgccaa
480
cagcatcaga gctactcgtc cttggagtct cgaggttgaa accacagatc tggacgttca
540
cgtgcactct cttcctgtac agtatttatt gttcctggca ctttatttaa agatttttga
600
ccctcaaaaa aaaaaaaaaa aa
622

<210> 6256
<211> 150
<212> PRT
<213> Homo sapiens

<400> 6256
Met Pro Leu His Ser Ser Leu Gly Asn Arg Val Arg Leu His Leu Lys
1   5   10   15
Lys Lys Lys Ala Thr Val Ala Ala Phe Thr Ala Ser Glu Gly His Ala
            20   25   30
His Pro Arg Val Val Glu Leu Pro Lys Thr Asp Glu Gly Leu Gly Phe
        35   40   45
Asn Ile Met Gly Gly Lys Glu Gln Asn Ser Pro Ile Tyr Ile Ser Arg
    50   55   60
Val Ile Pro Gly Gly Val Ala Asp Arg His Gly Gly Leu Lys Arg Gly
65   70   75   80
Asp Gln Leu Leu Ser Val Asn Gly Val Ser Val Glu Gly Glu Gln His
                85   90   95
Glu Lys Ala Val Glu Leu Leu Lys Ala Ala Gln Gly Ser Val Lys Leu
            100   105   110
Val Val Arg Tyr Thr Pro Arg Val Leu Glu Glu Met Glu Ala Arg Phe
        115   120   125
Glu Lys Met Arg Ser Ala Arg Arg Arg Gln Gln His Gln Ser Tyr Ser
    130   135   140
Ser Leu Glu Ser Arg Gly
145   150

<210> 6257
<211> 2216
<212> DNA
<213> Homo sapiens

<400> 6257
nttttttttt tttttttttt tttttgctc agcaatcttt attcagttct tcttgggggt
60
gggatgcctc ccttcccatg ctcccacccc tcccatccca gaactccgtt gggctcagtg
120
tcctctgttg agggaaggtc ttggtgccca gatgcctact ctgcaggaga gggaggaacc
180

5441

```
ttgtcccttt gcgggagtcg ctggtctctt ctgttgtggg gaagaaggaa ggtgggaggg
240
gcactgtcca ccagcactca gagctccatt atgtccccag ctggggttgc agggtagggg
300
ggactggggg tgtcccccag cctcagcaga cggagggcct cagggatgag gctgccagga
360
tagcgccaga gaagcagctc agagcaaggg ctcctgagtg ggggcagggc tggggagaag
420
gtcatggggg ggctgcagta ggggtggtca ttgtgcaggc tgagttgaga gaagtgggtg
480
gccatgttct cctcagacag aaactgcttg cgcagaggct cctgctcctc ctccaggcgc
540
cgcttggtgc tcatgggcac agctcctcgg agaggggagc tggcgtccag gccccaagtc
600
accccaagg cggcccgcgg gaggcgctgg gcccctccct gggggcctcg ctgcaagggc
660
tgctgcagga tcattgggtt ttggggtcct gcgggtggga tctgggcgac aggggaggag
720
tctctgaggg cgtggccaag agaggatggg cgtggcttta ggcggcaca gccgcgaggt
780
tctgcgcggg cgcggaagac gggcggcgcg tggcggaagg caggcttgct cctcggggcg
840
ggggagggta tccggcttaa gggggctgcg gtggacacca cttcttaatg tcgggggtct
900
tcgcggcgct cacctcggct cctagggttc gggacggtac gcaccagcca ccttcgcgcc
960
gaaggcggta gggcgccacg gagaggaacc gctctaggca cgtaaggcct cgtgaggttg
1020
cgtcgcgcgc ggagcactct gggacttgta gttctggaga tggagcgagc tgtgccgctc
1080
gcggtgcctc tgggtcagac agaggtgttc caggccttgc agcggctcca tatgaccatc
1140
ttctcccaga gcgtctcacc atgtgggaag tttctggcgg ctggcaacaa ttacgggcag
1200
attgccatct tcagcttgtc ctctgctttg agctcagaag ccaaagagga aagtaagaag
1260
ccggtggtga ctttccaagc ccatgatggg cccgtctata gcatggtttc caccgatcga
1320
catctgctta gtgctgggga tggggaggtg aaggcctggc tttgggcgga gatgctcaag
1380
aagggctgta aggagctgtg gcgtcgtcag cctccataca ggaccagcct ggaagtgcct
1440
gagatcaacg ctttgctgct ggtccccaag gagaattccc tcatcctggc tgggggagac
1500
tgtcagttgc acactatgga ccttgaaact gggactttca cgagggtcct ccggggccac
1560
acagactaca tccactgcct ggcactgcgg gaaaggagcc cagaggtgct gtcaggtggc
1620
gaggatggag ctgttcgact ttgggacctg cgcacagcca aggaggtcca gacgatcgag
1680
tctataagca cgaggagtgc tcgaggcccc acaatgggcg ctggattgga tgtttggact
1740
gattccgact ggatggtctg tggaggggggc ccagccctca ccctctggca cctccgatcc
1800
```

5442

```
tccacaccca ccaccatctt ccccatccgg gcgccacaga agcacgtcac cttctaccag
1860
gacctgattc tgtcagctgg ccagggccgc tgcgtcaacc agtggcagct gagcggggag
1920
ctgaaggccc aggtgcctgg ctcctcccca gggctgctca gcctcagcct caaccagcag
1980
cctgccgcgc ctgagtgcaa ggtcctgaca gctgcaggca acagctgccg ggtggatgtc
2040
ttcaccaacc tgggttaccg agccttctcc ctgtccttct gatctctgac gacaccccca
2100
gccagctcag ggttttagag tgtttttcat tttctttttt tttttttttt tacaataaag
2160
tttcaggctt tttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
2216
```

<210> 6258
<211> 340
<212> PRT
<213> Homo sapiens

<400> 6258
```
Met Glu Arg Ala Val Pro Leu Ala Val Pro Leu Gly Gln Thr Glu Val
1               5                   10                  15
Phe Gln Ala Leu Gln Arg Leu His Met Thr Ile Phe Ser Gln Ser Val
            20                  25                  30
Ser Pro Cys Gly Lys Phe Leu Ala Ala Gly Asn Asn Tyr Gly Gln Ile
            35                  40                  45
Ala Ile Phe Ser Leu Ser Ser Ala Leu Ser Ser Glu Ala Lys Glu Glu
    50                  55                  60
Ser Lys Lys Pro Val Val Thr Phe Gln Ala His Asp Gly Pro Val Tyr
65                  70                  75                  80
Ser Met Val Ser Thr Asp Arg His Leu Leu Ser Ala Gly Asp Gly Glu
                85                  90                  95
Val Lys Ala Trp Leu Trp Ala Glu Met Leu Lys Lys Gly Cys Lys Glu
            100                 105                 110
Leu Trp Arg Arg Gln Pro Pro Tyr Arg Thr Ser Leu Glu Val Pro Glu
        115                 120                 125
Ile Asn Ala Leu Leu Leu Val Pro Lys Glu Asn Ser Leu Ile Leu Ala
    130                 135                 140
Gly Gly Asp Cys Gln Leu His Thr Met Asp Leu Glu Thr Gly Thr Phe
145                 150                 155                 160
Thr Arg Val Leu Arg Gly His Thr Asp Tyr Ile His Cys Leu Ala Leu
                165                 170                 175
Arg Glu Arg Ser Pro Glu Val Leu Ser Gly Gly Glu Asp Gly Ala Val
            180                 185                 190
Arg Leu Trp Asp Leu Arg Thr Ala Lys Glu Val Gln Thr Ile Glu Ser
        195                 200                 205
Ile Ser Thr Arg Ser Ala Arg Gly Pro Thr Met Gly Ala Gly Leu Asp
    210                 215                 220
Val Trp Thr Asp Ser Asp Trp Met Val Cys Gly Gly Gly Pro Ala Leu
225                 230                 235                 240
Thr Leu Trp His Leu Arg Ser Ser Thr Pro Thr Ile Phe Pro Ile
                245                 250                 255
Arg Ala Pro Gln Lys His Val Thr Phe Tyr Gln Asp Leu Ile Leu Ser
```

5443

```
               260              265              270
Ala Gly Gln Gly Arg Cys Val Asn Gln Trp Gln Leu Ser Gly Glu Leu
         275              280              285
Lys Ala Gln Val Pro Gly Ser Ser Pro Gly Leu Leu Ser Leu Ser Leu
     290              295              300
Asn Gln Gln Pro Ala Ala Pro Glu Cys Lys Val Leu Thr Ala Ala Gly
305              310              315              320
Asn Ser Cys Arg Val Asp Val Phe Thr Asn Leu Gly Tyr Arg Ala Phe
             325              330              335
Ser Leu Ser Phe
             340                                        .
```

```
<210> 6259
<211> 384
<212> DNA
<213> Homo sapiens
```

```
<400> 6259
ccatgcagcg atcccataga acacagctca gagtctgata acagtgtcct tgaaattcca
60
gatgctttcg atagaacaga gaacatgtta tctatgcaga aaaatgaaaa gataaagtat
120
tctaggtttg ctgccacaaa cactagggta aaagcaaaac agaagcctct cattagtaac
180
tcacatacag accacttaat gggttgtact aagagtgcag agcctggaac cgagacgtct
240
caggttaatt ccttctctga tctgaaggca tctactcttg ttcacaaacc ccagtcagat
300
tttacaaatg atgctctctc tccaaaattc aacctgtcat caagcatatc cagtgagaac
360
tcgttaataa agggtggggc agca
384
```

```
<210> 6260
<211> 128
<212> PRT
<213> Homo sapiens
```

```
<400> 6260
Pro Cys Ser Asp Pro Ile Glu His Ser Ser Glu Ser Asp Asn Ser Val
1               5              10              15
Leu Glu Ile Pro Asp Ala Phe Asp Arg Thr Glu Asn Met Leu Ser Met
             20              25              30
Gln Lys Asn Glu Lys Ile Lys Tyr Ser Arg Phe Ala Ala Thr Asn Thr
         35              40              45
Arg Val Lys Ala Lys Gln Lys Pro Leu Ile Ser Asn Ser His Thr Asp
     50              55              60
His Leu Met Gly Cys Thr Lys Ser Ala Glu Pro Gly Thr Glu Thr Ser
65              70              75              80
Gln Val Asn Ser Phe Ser Asp Leu Lys Ala Ser Thr Leu Val His Lys
             85              90              95
Pro Gln Ser Asp Phe Thr Asn Asp Ala Leu Ser Pro Lys Phe Asn Leu
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Ser Ser Ser Ile Ser Ser Glu Asn Ser Leu Ile Lys Gly Gly Ala Ala
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5444

115   120   125

<210> 6261
<211> 3619
<212> DNA
<213> Homo sapiens

<400> 6261
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300
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360
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420
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480
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720
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1200
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1260
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1320
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1380

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2520
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2880
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3000
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5446

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3600
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3619


<210> 6262
<211> 431
<212> PRT
<213> Homo sapiens


<400> 6262
Met Gly Pro Gln Phe Gly Trp Asp His Ser Leu His Lys Arg Lys Arg
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Leu Pro Pro Val Lys Arg Ser Leu Val Tyr Tyr Leu Lys Asn Arg Glu
            20                  25                  30
Val Arg Leu Gln Asn Glu Thr Ser Tyr Ser Arg Val Leu His Gly Tyr
        35                  40                  45
Ala Ala Gln Gln Leu Pro Ser Leu Leu Lys Glu Arg Glu Phe His Leu
    50                  55                  60
Gly Thr Leu Asn Lys Val Phe Ala Ser Gln Trp Leu Asn His Arg Gln
65                  70                  75                  80
Val Val Cys Gly Thr Lys Cys Asn Thr Leu Phe Val Val Asp Val Gln
                85                  90                  95
Thr Ser Gln Ile Thr Lys Ile Pro Ile Leu Lys Asp Arg Glu Pro Gly
            100                 105                 110
Gly Val Thr Gln Gln Gly Cys Gly Ile His Ala Ile Glu Leu Asn Pro
        115                 120                 125
Ser Arg Thr Leu Leu Ala Thr Gly Gly Asp Asn Pro Asn Ser Leu Ala
    130                 135                 140
Ile Tyr Arg Leu Pro Thr Leu Asp Pro Val Cys Val Gly Asp Asp Gly
145                 150                 155                 160
His Lys Asp Trp Ile Phe Ser Ile Ala Trp Ile Ser Asp Thr Met Ala
                165                 170                 175
Val Ser Gly Ser Arg Asp Gly Ser Met Gly Leu Trp Glu Val Thr Asp
                180                 185                 190
Asp Val Leu Thr Lys Ser Asp Ala Arg His Asn Val Ser Arg Val Pro
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5447

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              195                     200                     205
Val Tyr Ala His Ile Thr His Lys Ala Leu Lys Asp Ile Pro Lys Glu
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Asp Thr Asn Pro Asp Asn Cys Lys Val Arg Ala Leu Ala Phe Asn Asn
225                     230                     235                     240
Lys Asn Lys Glu Leu Gly Ala Val Ser Leu Asp Gly Tyr Phe His Leu
                245                     250                     255
Trp Lys Ala Glu Asn Thr Leu Ser Lys Leu Leu Ser Thr Lys Leu Pro
            260                     265                     270
Tyr Cys Arg Glu Asn Val Cys Leu Ala Tyr Gly Ser Glu Trp Ser Val
            275                     280                     285
Tyr Ala Val Gly Ser Gln Ala His Val Ser Phe Leu Asp Pro Arg Gln
        290                     295                     300
Pro Ser Tyr Asn Val Lys Ser Val Cys Ser Arg Glu Arg Gly Ser Gly
305                     310                     315                     320
Ile Arg Ser Val Ser Phe Tyr Glu His Ile Ile Thr Val Gly Thr Gly
                325                     330                     335
Gln Gly Ser Leu Leu Phe Tyr Asp Ile Arg Ala Gln Arg Phe Leu Glu
                340                     345                     350
Glu Arg Leu Ser Ala Cys Tyr Gly Ser Lys Pro Arg Leu Ala Gly Glu
            355                     360                     365
Asn Leu Lys Leu Thr Thr Gly Lys Gly Trp Leu Asn His Asp Glu Thr
            370                     375                     380
Trp Arg Asn Tyr Phe Ser Asp Ile Asp Phe Phe Pro Asn Ala Val Tyr
385                     390                     395                     400
Thr His Cys Tyr Asp Ser Ser Gly Thr Lys Leu Phe Val Ala Gly Gly
                405                     410                     415
Pro Leu Pro Ser Gly Leu His Gly Asn Tyr Ala Gly Leu Trp Ser
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<210> 6263
<211> 2508
<212> DNA
<213> Homo sapiens

<400> 6263
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120
ggggcgcctg aaggttaccg agtgcatgag cgcctagcgc ttcccgcgct gccccgcccg
180
ctggcccgcc gacccgcccg ccggctcgcc cgccagcccc tcggcgcccg gcggcggcgg
240
cggcggtggc ggcgacggtc gcaggaggtg ccgtctgcct cccaggtgcg cgcttcgctc
300
ccggagccgc ggaactcggc ggccgccatg gcgtccaaca tggaccggga gatgatcctg
360
gcggattttc aggcatgtac tggcattgaa aacattgacg aagctattac attgcttgaa
420
caaaataatt gggacttagt ggcagctatc aatggtgtaa taccacagga aaatggcatt
480
ctacaaagtg aatatggagg tgagaccata ccaggacctg catttaatcc agcaagtcat
540
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ccagcttcag ctcctacttc ctcttcttct tcagcgtttc gacctgtaat gccatccagg
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660
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720
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1320
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1380
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1920
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1980
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2040
gaaaatgctg agcctgtgag caaactgcgg atccggaccc ccagtggcga gttcttggag
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2160
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5449

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2340
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2400
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2508

<210> 6264
<211> 654
<212> PRT
<213> Homo sapiens

<400> 6264
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            20   25   30
Asn Asn Trp Asp Leu Val Ala Ala Ile Asn Gly Val Ile Pro Gln Glu
        35   40   45
Asn Gly Ile Leu Gln Ser Glu Tyr Gly Gly Glu Thr Ile Pro Gly Pro
    50   55   60
Ala Phe Asn Pro Ala Ser His Pro Ala Ser Ala Pro Thr Ser Ser Ser
65   70   75   80
Ser Ser Ala Phe Arg Pro Val Met Pro Ser Arg Gln Ile Val Glu Arg
                85   90   95
Gln Pro Arg Met Leu Asp Phe Arg Val Glu Tyr Arg Asp Arg Asn Val
            100   105   110
Asp Val Val Leu Glu Asp Thr Cys Thr Val Gly Glu Ile Lys Gln Ile
            115   120   125
Leu Glu Asn Glu Leu Gln Ile Pro Val Ser Lys Met Leu Leu Lys Gly
        130   135   140
Trp Lys Thr Gly Asp Val Glu Asp Ser Thr Val Leu Lys Ser Leu His
145   150   155   160
Leu Pro Lys Asn Asn Ser Leu Tyr Val Leu Thr Pro Asp Leu Pro Pro
                165   170   175
Pro Ser Ser Ser Ser His Ala Gly Ala Leu Gln Glu Ser Leu Asn Gln
            180   185   190
Asn Phe Met Leu Ile Ile Thr His Arg Glu Val Gln Arg Glu Tyr Asn
        195   200   205
Leu Asn Phe Ser Gly Ser Ser Thr Ile Gln Glu Val Lys Arg Asn Val
    210   215   220
Tyr Asp Leu Thr Ser Ile Pro Val Arg His Gln Leu Trp Glu Gly Trp
225   230   235   240
Pro Thr Ser Ala Thr Asp Asp Ser Met Cys Leu Ala Glu Ser Gly Leu
                245   250   255
Ser Tyr Pro Cys His Arg Leu Thr Val Gly Arg Arg Ser Ser Pro Ala
            260   265   270
Gln Thr Arg Glu Gln Ser Glu Glu Gln Ile Thr Asp Val His Met Val

5450

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                  275                   280                   285
    Ser Asp Ser Asp Gly Asp Asp Phe Glu Asp Ala Thr Glu Phe Gly Val
        290                   295                   300
    Asp Asp Gly Glu Val Phe Gly Met Ala Ser Ser Ala Leu Arg Lys Ser
    305                   310                   315                   320
    Pro Met Ile Cys Phe Leu Val Pro Glu Asn Ala Glu Asn Glu Gly Asp
                      325                   330                   335
    Ala Leu Leu Gln Phe Thr Ala Glu Phe Ser Ser Arg Tyr Gly Asp Cys
                      340                   345                   350
    His Pro Val Phe Phe Ile Gly Ser Leu Glu Ala Ala Phe Gln Glu Ala
        355                   360                   365
    Phe Tyr Val Lys Ala Arg Asp Arg Lys Leu Leu Ala Ile Tyr Leu His
        370                   375                   380
    His Asp Glu Ser Val Leu Thr Asn Val Phe Cys Ser Gln Met Leu Cys
    385                   390                   395                   400
    Ala Glu Ser Ile Val Ser Tyr Leu Ser Gln Asn Phe Ile Thr Trp Ala
                      405                   410                   415
    Trp Asp Leu Thr Lys Asp Ser Asn Arg Ala Arg Phe Leu Thr Met Cys
                      420                   425                   430
    Asn Arg His Phe Gly Ser Val Val Ala Gln Thr Ile Arg Thr Gln Lys
        435                   440                   445
    Thr Asp Gln Phe Pro Leu Phe Leu Ile Ile Met Gly Lys Arg Ser Ser
        450                   455                   460
    Asn Glu Val Leu Asn Val Ile Gln Gly Asn Thr Thr Val Asp Glu Leu
    465                   470                   475                   480
    Met Met Arg Leu Met Ala Ala Met Glu Ile Phe Thr Ala Gln Gln Gln
                      485                   490                   495
    Glu Asp Ile Lys Asp Glu Asp Glu Arg Glu Ala Arg Glu Asn Val Lys
                      500                   505                   510
    Arg Glu Gln Asp Glu Ala Tyr Arg Leu Ser Leu Glu Ala Asp Arg Ala
        515                   520                   525
    Lys Arg Glu Ala His Glu Arg Glu Met Ala Glu Gln Phe Arg Leu Glu
        530                   535                   540
    Gln Ile Arg Lys Glu Gln Glu Glu Glu Arg Glu Ala Ile Arg Leu Ser
    545                   550                   555                   560
    Leu Glu Gln Ala Leu Pro Pro Glu Pro Lys Glu Glu Asn Ala Glu Pro
                      565                   570                   575
    Val Ser Lys Leu Arg Ile Arg Thr Pro Ser Gly Glu Phe Leu Glu Arg
                      580                   585                   590
    Arg Phe Leu Ala Ser Asn Lys Leu Gln Ile Val Phe Asp Phe Val Ala
        595                   600                   605
    Ser Lys Gly Phe Pro Trp Asp Glu Tyr Lys Leu Leu Ser Thr Phe Pro
        610                   615                   620
    Arg Arg Asp Val Thr Gln Leu Asp Pro Asn Lys Ser Leu Leu Glu Val
    625                   630                   635                   640
    Lys Leu Phe Pro Gln Glu Thr Leu Phe Leu Glu Ala Lys Glu
                      645                   650
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<210> 6265
<211> 1344
<212> DNA
<213> Homo sapiens

<400> 6265

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180
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240
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300
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360
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420
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480
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1140
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1200
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1260
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1344
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<210> 6266
<211> 240
<212> PRT
<213> Homo sapiens

<400> 6266
Xaa Ala Leu Pro Ala Ser His Arg Pro Gly Gln Gln Gly Leu Asn Pro

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            20                   25                   30
Ser Pro Asp Asp Lys Glu Phe Gln Ser Val Glu Glu Glu Met Gln Ser
            35                   40                   45
Thr Val Arg Glu His Arg Asp Gly Gly His Ala Gly Gly Ile Phe Asn
       50               55                60
Arg Tyr Asn Ile Leu Lys Ile Gln Lys Val Cys Asn Lys Lys Leu Trp
65                   70                   75                   80
Glu Arg Tyr Thr His Arg Arg Lys Glu Val Ser Glu Glu Asn His Asn
               85                   90                   95
His Ala Asn Glu Arg Met Leu Phe His Gly Ser Pro Phe Val Asn Ala
           100                  105                  110
Ile Ile His Lys Gly Phe Asp Glu Arg His Ala Tyr Ile Gly Gly Met
       115                  120                  125
Phe Gly Ala Gly Ile Tyr Phe Ala Glu Asn Ser Ser Lys Ser Asn Gln
   130                  135  ·                140
Tyr Val Tyr Gly Ile Gly Gly Gly Thr Gly Cys Pro Val His Lys Asp
145                  150                  155                  160
Arg Ser Cys Tyr Ile Cys His Arg Gln Leu Leu Phe Cys Arg Val Thr
               165                  170                  175
Leu Gly Lys Ser Phe Leu Gln Phe Ser Ala Met Lys Met Ala His Ser
           180                  185                  190
Pro Pro Gly His His Ser Val Thr Gly Arg Pro Ser Val Asn Gly Leu
       195                  200                  205
Ala Leu Ala Glu Tyr Val Ile Tyr Arg Gly Glu Gln Ala Tyr Pro Glu
   210                  215                  220
Tyr Leu Ile Thr Tyr Gln Ile Met Arg Pro Glu Gly Met Val Asp Gly
225                  230                  235                  240
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<210> 6267
<211> 328
<212> DNA
<213> Homo sapiens

<400> 6267
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120
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180
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328

<210> 6268
<211> 83
<212> PRT
<213> Homo sapiens

<center>5453</center>

<400> 6268
Ala Glu Trp Gly Cys Pro Ala Val Thr Gln Pro Leu Ser Pro Asp Glu
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Pro Phe Leu Gln Phe Arg Arg Asn Val Phe Phe Pro Lys Arg Arg Glu
            20   25 ·   30
Leu Gln Ile His Asp Glu Glu Val Leu Arg Leu Leu Tyr Glu Glu Ala
        35   40   45
Lys Gly Asn Val Leu Ala Ala Arg Tyr Pro Cys Asp Val Glu Asp Cys
    50   55   60
Glu Ala Leu Gly Ala Leu Val Cys Arg Val Gln Leu Gly Pro Tyr Gln
65   70   75   80
Pro Gly Arg

<210> 6269
<211> 923
<212> DNA
<213> Homo sapiens

<400> 6269
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gctttagatc aactgcggga cgtgattgag tctcaggagg aactaatcca ccagctgagg
120
aacgtgatgg ttctccagga cgaaaatttt gtcagtaaag aagagttcca ggcagtggag
180
aagaagctgg tggaagagaa agctgcccat gccaaaacca aggtcctcct ggccaaggaa
240
gaggagaagt tacagtttgc cctcggagag gtagaggtgc tatccaagca gctggagaaa
300
gagaagctgg cctttgaaaa agcgctctcc agtgtcaaga gcaaagtcct tcaggagtcc
360
agcaagaagg accagctcat caccaagtgc aatgagattg agtctcacat tataaagcaa
420
gaagatatac ttaatggcaa agagaatgag attaaagagt tgcagcaagt tatcagccag
480
cagaaacaga tcttcagccc accaccagcc ggctccgttg caggaatcac atgtctgact
540
tccggatcca gaagcagcag gaaagctaca tggcccaggt gctggaccag aagcataaga
600
aagcctcagg gacacgtcag gcccgcagcc accagcatcc cagggaaaaa taaaatggcc
660
gccgctttcc tgttctctgg ctgtaatccc cagcctctgc cttctctgct ctgggagtcc
720
ccagcctcta gcccctgcta cttccctccc tcttggatag tggtaggggt ccacaaggtg
780
ggggcttgta gcctagggga ggagctgggt ctttgttgtc tggtaggcac caccgcttcc
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900
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923

<210> 6270

<211> 307
<212> PRT
<213> Homo sapiens

<400> 6270
Xaa Arg Lys Met Ala Thr Pro Leu Gly Trp Ser Lys Ala Gly Ser Gly
1   5   10   15
Ser Val Cys Leu Ala Leu Asp Gln Leu Arg Asp Val Ile Glu Ser Gln
            20   25   30
Glu Glu Leu Ile His Gln Leu Arg Asn Val Met Val Leu Gln Asp Glu
        35   40   45
Asn Phe Val Ser Lys Glu Glu Phe Gln Ala Val Glu Lys Lys Leu Val
    50   55   60
Glu Glu Lys Ala Ala His Ala Lys Thr Lys Val Leu Leu Ala Lys Glu
65   70   75   80
Glu Glu Lys Leu Gln Phe Ala Leu Gly Glu Val Glu Val Leu Ser Lys
                85   90   95
Gln Leu Glu Lys Glu Lys Leu Ala Phe Glu Lys Ala Leu Ser Ser Val
            100   105   110
Lys Ser Lys Val Leu Gln Glu Ser Ser Lys Lys Asp Gln Leu Ile Thr
            115   120   125
Lys Cys Asn Glu Ile Glu Ser His Ile Ile Lys Gln Glu Asp Ile Leu
    130   135   140
Asn Gly Lys Glu Asn Glu Ile Lys Glu Leu Gln Gln Val Ile Ser Gln
145   150   155   160
Gln Lys Gln Ile Phe Ser Pro Pro Ala Gly Ser Val Ala Gly Ile
                165   170   175
Thr Cys Leu Thr Ser Gly Ser Arg Ser Ser Arg Lys Ala Thr Trp Pro
            180   185   190
Arg Cys Trp Thr Arg Ser Ile Arg Lys Pro Gln Gly His Val Arg Pro
            195   200   205
Ala Ala Thr Ser Ile Pro Gly Lys Asn Lys Met Ala Ala Ala Phe Leu
    210   215   220
Phe Ser Gly Cys Asn Pro Gln Pro Leu Pro Ser Leu Leu Trp Glu Ser
225   230   235   240
Pro Ala Ser Ser Pro Cys Tyr Phe Pro Pro Ser Trp Ile Val Val Gly
                245   250   255
Val His Lys Val Gly Ala Cys Ser Leu Gly Glu Glu Leu Gly Leu Cys
            260   265   270
Cys Leu Val Gly Thr Thr Ala Ser Phe Gly Tyr Leu Ile Pro Ser Tyr
            275   280   285
Ile Asn Ser Pro Gly Tyr Pro Val Ile Phe His Pro Thr Pro Ser Val
    290   295   300
Leu Val Asn
305

<210> 6271
<211> 1437
<212> DNA
<213> Homo sapiens

<400> 6271
nccatggcga cgggcggcca gcagaaggag aacacgctgc ttcacctctt cgccggcggg
60

```
tgtggaggca cagttggtgc tattttcact tgtccactag aagtcattaa gacacggttg
120
cagtcttcaa gattagctct ccggacagtc tactatcctc aggttcatct ggggaccatt
180
agtggagctg gaatggtgag accaacatcc gtgacacctg gactctttca ggttctgaag
240
gctgtatact ttgcatgtta ctccaaagcc aaagagcaat ttaatggcat tttcgtgcct
300
aacagcaata ttgtgcatct tttctcagct ggctctgcag cttttatcac aaattcctta
360
atgaatccta tatggatggt taaaacccga atgcagctag aacagaaagt gaggggctct
420
aagcagatga atacactcca gtgtgctcgt tacgtttacc agaccgaagg cattcgtggc
480
ttctatagag gattaactgc ctcgtatgct ggaatttccg aaactataat ctgctttgct
540
atttatgaaa gtttaaagaa gtatctgaaa gaagctccat tagcctcttc tgcaaatggg
600
actgagaaaa attccacaag ttttttggga cttatggcag ctgctgctct ttctaagggc
660
tgtgcctcct gcattgctta tccacacgaa gtcataagga cgaggctccg ggaagagggc
720
accaagtaca agtcttttgt ccagacggcg cgcctggtgt ccgggaaga aggctacctt
780
gcctttata gaggactgtt tgcccagctt atccggcaga tcccaaatac tgccattgtg
840
ttgtctactt atgagttaat tgtgtacctg ttagaagacc gtactcagta acaggccgga
900
aaattgtgct ctagaagaat aaaactgaaa aactctagag aatttttttt ccccattgat
960
gtttagaaag tttgagactg aaacaggaaa ggccataaaa tatctggttc atatcacctg
1020
ttggacattt cctttggat tcatgctttc tggaaggttt aaattcatta acgttaatag
1080
ttaattataa cttttttttt aacttaagag gattcagggt taagcaccaa ctaaattaaa
1140
tcatgctatt taatttaagt atacatttgg cttgtgtcct cttttatgct cactatacta
1200
tgaaggactt aagtaattca gataaacctg ccctagaact gcagagaaaa atgataaagt
1260
gagaatacaa cttgttttat aatctgactt taagatcttg cactgctaga cagggaagaa
1320
gtgtcgcatt ttggctgggc actgtggctc acgcctgtaa tcccagcact ttgggaggcc
1380
gaggtgggtg gatcacaagg tcaggagatc gagaccatcc tggctaacca cctgcag
1437


<210> 6272
<211> 296
<212> PRT
<213> Homo sapiens

<400> 6272
Xaa Met Ala Thr Gly Gly Gln Gln Lys Glu Asn Thr Leu Leu His Leu
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5456

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 1              5                    10                 15
Phe Ala Gly Gly Cys Gly Gly Thr Val Gly Ala Ile Phe Thr Cys Pro
            20                    25                 30
Leu Glu Val Ile Lys Thr Arg Leu Gln Ser Ser Arg Leu Ala Leu Arg
        35                    40                 45
Thr Val Tyr Tyr Pro Gln Val His Leu Gly Thr Ile Ser Gly Ala Gly
    50                    55                 60
Met Val Arg Pro Thr Ser Val Thr Pro Gly Leu Phe Gln Val Leu Lys
65                    70                 75                 80
Ala Val Tyr Phe Ala Cys Tyr Ser Lys Ala Lys Glu Gln Phe Asn Gly
            85                    90                 95
Ile Phe Val Pro Asn Ser Asn Ile Val His Leu Phe Ser Ala Gly Ser
            100                   105                110
Ala Ala Phe Ile Thr Asn Ser Leu Met Asn Pro Ile Trp Met Val Lys
        115                   120                125
Thr Arg Met Gln Leu Glu Gln Lys Val Arg Gly Ser Lys Gln Met Asn
    130                   135                140
Thr Leu Gln Cys Ala Arg Tyr Val Tyr Gln Thr Glu Gly Ile Arg Gly
145                   150                155                160
Phe Tyr Arg Gly Leu Thr Ala Ser Tyr Ala Gly Ile Ser Glu Thr Ile
            165                   170                175
Ile Cys Phe Ala Ile Tyr Glu Ser Leu Lys Lys Tyr Leu Lys Glu Ala
            180                   185                190
Pro Leu Ala Ser Ser Ala Asn Gly Thr Glu Lys Asn Ser Thr Ser Phe
        195                   200                205
Phe Gly Leu Met Ala Ala Ala Ala Leu Ser Lys Gly Cys Ala Ser Cys
    210                   215                220
Ile Ala Tyr Pro His Glu Val Ile Arg Thr Arg Leu Arg Glu Glu Gly
225                   230                235                240
Thr Lys Tyr Lys Ser Phe Val Gln Thr Ala Arg Leu Val Phe Arg Glu
            245                   250                255
Glu Gly Tyr Leu Ala Phe Tyr Arg Gly Leu Phe Ala Gln Leu Ile Arg
        260                   265                270
Gln Ile Pro Asn Thr Ala Ile Val Leu Ser Thr Tyr Glu Leu Ile Val
    275                   280                285
Tyr Leu Leu Glu Asp Arg Thr Gln
    290                   295
```

```
<210> 6273
<211> 2355
<212> DNA
<213> Homo sapiens

<400> 6273
ncgaggatca ttgcagaggc cctgactcga gtcatctaca acctgacaga gaaggggaca
60
ccccagacat gccggtgttc acagagcaga tgatccagca ggagcagctg gactcggtga
120
tggactggct caccaaccag ccgcggccgg cagctggtgg acaaggacag caccttcctc
180
agcacgctgg agcaccacct gagccgctac ctgaaggacg tgaagcagca ccacgtcaag
240
gctgacaagc gggacccaga gtttgtcttc tacgaccagc tgaagcaagt gatgaatgcg
300
```

5457

```
tacagagtca agccggccgt ctttgacctg ctcctggctg ttggcattgc tgcctacctc
360
ggcatggcct acgtggctgt ccaggtgagc agtgcccagg ctcagcactt cagcctcctc
420
tacaagaccg tccagaggct gctcgtgaag gccaagacac agtgacacag ccacccccac
480
agccggagcc cccgccgctc cacagtccct ggggccgagc acgagtgagt ggacactgcc
540
ccgccgcggg cggccctgca gggacagggg ccctctccct ccccggcggt ggttggaaca
600
ctgaattaca gagctttttt ctgttgctct ccgagactgg gggggggattg tttcttcttt
660
tccttgtctt tgaacttcct tggaggagag cttgggagac gtcccggggc caggctacgg
720
acttgcggac gagccccca gtcctgggag ccggccgccc tcggtctggt gtaagcacac
780
atgcacgatt aaagaggaga cgccgggacc ccctgcccga tcgcgcgcgg cctccgccca
840
ccgcctcctg ccgcaagggg cctggactgc aggcctgacc tgctccctgc tccgtgtctg
900
tcctaggacg tcccctcccg ctccccgatg gtggcgtgga catggttatt tatctctgct
960
ccttcttgcc tggaggaggg cagtgccagc cctggggttc tgggattcca gccctcctgg
1020
agcctttgt tccccatgtg gtctcagtga cccgtccccc tgacagtggg ctcggggagc
1080
tgcatcaccc agccttcccc ttctccgact gcagggtctg atgtcatcgt tgacagcctt
1140
tgcttcgtgg gggcctggca ggcctgnncc tccccgaccc ccgacccact gcaaacccc
1200
gttccctgc actcctcttc tcccagccca tccctccggc ccctgtgcct ctgcggcccc
1260
agcccagctc ccagggccgt cacctgcttg gccctggcca gctccctgcc ctgagtcctg
1320
agccagtgcc tggtgtttcc tgggctcggt actgggcccc caggcnatcc agggctttgc
1380
acggccagtt ggtcctccct ggggaactgg gtgcgggtgg agtactggga ggcaggaggt
1440
ggcccgggga ggccttgtgg ctcctcccct cgctcctcgc cctgggcctc aagttcctca
1500
tcaatagaaa ggatgtgttc ggggtggggg cgtcaggtga gaacgtttgc tgggaaggag
1560
aggacttggg gcatggctct ggggcaccct tcctggaact cagagaggaa ggtccgggcc
1620
ctcgggaagc cttggacaga accctccacc ccgcagacca ggcgtcgtgt gtgtgtggga
1680
gagaaggagg cccgtgttga gctcagggag accccggtgt gtccgttctt tagcaatata
1740
acctacccag tgcgtgccga gcaggcttgg tggggaaggg acttgagctg ggcaagtcct
1800
ggcctggcac ccgcagccgt ctcccttccg tggcccaggg aggtgtttgc tgtccgaagg
1860
acctgggccg gcccatggga gcctggggtt ctgtccagat aggaccaggg ggtctcactt
1920
```

5458

```
tggccaccag ttcttcggcc agcacctctg ccctccagaa cctgcagcct ggaggggtga
1980
ggggacaacc acccctcttt cctccaggtt ggcaggggac cctcttctcc cgtctgccct
2040
gcgggttgcc cgcctcctcc agagacttgc ccaagggccc atcaccactg gcctctgggc
2100
acttgtgctg agactctggg acccaggcag ctgccacctt gtcaccatga gagaatttgg
2160
ggagtgcttg catgctagcc agcaggctcc tgtctgggtg ccacggggcc agcattttgg
2220
agggagcttc cttccttcct tcctggacag gtcgtcagga tggatgcact gactgaccgt
2280
ctggggctca ggctggtgtg ggatgcagcc ggccgatgag aaaataaagc catattgaat
2340
gatcaaaaaa aaaaa
2355
```

<210> 6274
<211> 70
<212> PRT
<213> Homo sapiens

<400> 6274
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Asp Pro Glu Phe Val Phe Tyr Asp Gln Leu Lys Gln Val Met Asn Ala
1               5                  10                  15
Tyr Arg Val Lys Pro Ala Val Phe Asp Leu Leu Leu Ala Val Gly Ile
            20                  25                  30
Ala Ala Tyr Leu Gly Met Ala Tyr Val Ala Val Gln Val Ser Ser Ala
        35                  40                  45
Gln Ala Gln His Phe Ser Leu Leu Tyr Lys Thr Val Gln Arg Leu Leu
    50                  55                  60
Val Lys Ala Lys Thr Gln
65                  70
```

<210> 6275
<211> 1534
<212> DNA
<213> Homo sapiens

<400> 6275
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gggcggtagc gacaggccag agctgcggcc tgagcagcca gcgtccggca tgaaggtctg
60
gggtctggct gctgcctgct tcttgctcca gcaccatgga atgcctgcgc agtttaccct
120
gcctcctgcc ccgcgcgatg agacttcccc ggcggacgct gtgtgccctg gccttggacg
180
tgacctctgt gggtcctccc gttgctgcct gcggccgccg agccaacctg attggaagga
240
gccgagcggc gcagctttgc gggcccgacc ggctccgcgt ggcaggtgaa gtgcaccggt
300
ttagaacctc tgacgtctct caagccactt tagccagtgt agccccagta tttactgtga
360
caaaatttga caaacaggga aacgttactt cttttgaaag gaagaaaact gaattatacc
420
```

```
aagagttagg tcttcaagcc agagatttga gatttcagca tgtaatgagt atcacagtca
480
gaaacaatag gattatcatg agaatggagt atttgaaagc tgtgataact ccagagtgtc
540
ttctgatatt agattatcgt aatttaaact tagagcaatg gctgttccgg gaactccctt
600
cacagttgtc tggagagggt caactcgtta catacccttt accttttgag tttagagcta
660
tagaagcact cctgcaatat tggatcatgt tgttatctag atcaacaccc ttcaggggaa
720
acttagcatt ttgcagccac tgatccttga gaccttggat gctttggtgg accccaaaca
780
ttcttctgta gacagaagca aactgcacat tttactacag aatggcaaaa gtctatcaga
840
gttagaaaca gatattaaaa ttttcaaaga gtcaattttg gagatcttgg atgaggaaga
900
gttgctagaa gagctctgtg tatcaaaatg ggagtgaccc acaagtcttt gnaaaagagc
960
agtgctggga ttgaccatgc agaagaaatg gagttgctgt tggaaaacta ctaccgattg
1020
gctgacgatc tctccaatgc agctcgtgag cttagggtgc tgattgatga ttcacaaagt
1080
attattttca ttaatctgga cagccaccga aacgtgatga ttaggttgaa tctacagctg
1140
accatgggaa ccttctctct ttcgctcttt ggactaatgg gagttgcttt tggaatgaat
1200
ttggaatctt cccttgaaga ggaccataga attttttggc tgattacagg aattatgttc
1260
atgggaagtg gcctcatctg gaggcgcctg ctttcattcc ttggacgaca gctagaagct
1320
ccattgcctc ctatgatggc ttctttacct aaaaagactc ttctggcaga tagaagcatg
1380
gaattgaaaa atagcctcag actggatgga cttggatcag gaaggagcat cctaacaaac
1440
cgttaggaac agccccgtgg atactgaagt ttttttatg gtagttacag gaaacttctg
1500
atactctttt tattattttc ttgtatagag tcag
1534
```

```
<210> 6276
<211> 172
<212> PRT
<213> Homo sapiens

<400> 6276
Met Gly Val Thr His Lys Ser Leu Xaa Lys Ser Ser Ala Gly Ile Asp
1               5                   10                  15
His Ala Glu Glu Met Glu Leu Leu Leu Glu Asn Tyr Tyr Arg Leu Ala
                20                  25                  30
Asp Asp Leu Ser Asn Ala Ala Arg Glu Leu Arg Val Leu Ile Asp Asp
          35                  40                  45
Ser Gln Ser Ile Ile Phe Ile Asn Leu Asp Ser His Arg Asn Val Met
      50                  55                  60
Ile Arg Leu Asn Leu Gln Leu Thr Met Gly Thr Phe Ser Leu Ser Leu
```

```
65                    70                    75                    80
Phe Gly Leu Met Gly Val Ala Phe Gly Met Asn Leu Glu Ser Ser Leu
                85                    90                    95
Glu Glu Asp His Arg Ile Phe Trp Leu Ile Thr Gly Ile Met Phe Met
            100                   105                   110
Gly Ser Gly Leu Ile Trp Arg Arg Leu Leu Ser Phe Leu Gly Arg Gln
        115                   120                   125
Leu Glu Ala Pro Leu Pro Pro Met Met Ala Ser Leu Pro Lys Lys Thr
    130                   135                   140
Leu Leu Ala Asp Arg Ser Met Glu Leu Lys Asn Ser Leu Arg Leu Asp
145                   150                   155                   160
Gly Leu Gly Ser Gly Arg Ser Ile Leu Thr Asn Arg
                165                   170
```

<210> 6277
<211> 1206
<212> DNA
<213> Homo sapiens

<400> 6277
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gctagcatgg cggtgatgga aggagacttg gtgaagaagg aaagctttgg tgtgaagctt
60
atggacttcc aggcccaccg gcggggtggc actctaaata gaaagcacat atcccccgct
120
ttccagccgc cacttccgcc cacagatggc agcaccgtgg tgcccgctgg cccagagccc
180
cctccccaga gctctagggc tgaaagcagc tctgggggtg ggactgtccc ctcttccgcg
240
ggcatactgg agcaggggcc gagcccaggc gacggcagtc ctcccaaacc gaaggaccct
300
gtatctgcag ctgtgccagc accangggag aaacaacagt cagatagcat ctggccaaaa
360
tcagccccag gcagctgctg gctcccacca gctctccatg gccacctca caatgctgca
420
gggcccagcc cgcatacact gcgccgagct gttaaaaaac ccgctccagc accccgaaa
480
ccgggcaacc cacctcctgg ccaccccggg ggccagagtt cttcaggaac atctcagcat
540
ccacccagtc tgtcaccaaa gccacccacc cgaagcccct ctcctccacc cagcacacgg
600
gccagcctcc aggccagccc tccgccccct cccagctctc agcaccccgg aggtactcca
660
ngcagcttgt ctccaatcca agctcccaat cacccaccgc cgcagccccc tacgcaggcc
720
acgccactga tgcacaccaa acccaatagc cagggccctc ccaacccat ggcattgccc
780
agtgagcatg gacttgagca gccatctcac acccctcccc agactccaac gcccccagt
840
actccgcccc taggaaaaca gaaccccagt ctgccagctc ctcagaccct ggcagggggt
900
aaccctgaaa ctgcacagcc acatgctgga accttaccga gaccgagacc agtaccaaag
960
ccaaggaacc ggcccagcgt gcccccaccc ccccaacctc ctggtgtcca ctcagctggg
1020
```

```
gacagcagcc tcaccaacac agcaccaaca gcttccaaga tagtaacaga ctccaattcc
1080
agggtttcag aaccgcatcg cagcatcttt cctgaaatgc actcagactc agccagcaaa
1140
gacgtgcctg gccgcatcct gctggatata gacaatgata ccgagagcac tgccctgtga
1200
agaaag
1206


<210> 6278
<211> 399
<212> PRT
<213> Homo sapiens


<400> 6278
Ala Ser Met Ala Val Met Glu Gly Asp Leu Val Lys Lys Glu Ser Phe
1               5                   10                  15
Gly Val Lys Leu Met Asp Phe Gln Ala His Arg Arg Gly Gly Thr Leu
            20                  25                  30
Asn Arg Lys His Ile Ser Pro Ala Phe Gln Pro Pro Leu Pro Pro Thr
        35                  40                  45
Asp Gly Ser Thr Val Val Pro Ala Gly Pro Glu Pro Pro Gln Ser
    50                  55                  60
Ser Arg Ala Glu Ser Ser Ser Gly Gly Gly Thr Val Pro Ser Ser Ala
65                  70                  75                  80
Gly Ile Leu Glu Gln Gly Pro Ser Pro Gly Asp Gly Ser Pro Pro Lys
                85                  90                  95
Pro Lys Asp Pro Val Ser Ala Ala Val Pro Ala Pro Xaa Glu Lys Gln
            100                 105                 110
Gln Ser Asp Ser Ile Trp Pro Lys Ser Ala Pro Gly Ser Cys Trp Leu
        115                 120                 125
Pro Pro Ala Leu His Gly Pro Pro His Asn Ala Ala Gly Pro Ser Pro
    130                 135                 140
His Thr Leu Arg Arg Ala Val Lys Lys Pro Ala Pro Ala Pro Pro Lys
145                 150                 155                 160
Pro Gly Asn Pro Pro Pro Gly His Pro Gly Gly Gln Ser Ser Ser Gly
                165                 170                 175
Thr Ser Gln His Pro Pro Ser Leu Ser Pro Lys Pro Pro Thr Arg Ser
            180                 185                 190
Pro Ser Pro Pro Pro Ser Thr Arg Ala Ser Leu Gln Ala Ser Pro Pro
        195                 200                 205
Pro Pro Pro Ser Ser Gln His Pro Gly Gly Thr Pro Xaa Ser Leu Ser
    210                 215                 220
Pro Ile Gln Ala Pro Asn His Pro Pro Pro Gln Pro Pro Thr Gln Ala
225                 230                 235                 240
Thr Pro Leu Met His Thr Lys Pro Asn Ser Gln Gly Pro Pro Asn Pro
                245                 250                 255
Met Ala Leu Pro Ser Glu His Gly Leu Glu Gln Pro Ser His Thr Pro
            260                 265                 270
Pro Gln Thr Pro Thr Pro Pro Ser Thr Pro Pro Leu Gly Lys Gln Asn
        275                 280                 285
Pro Ser Leu Pro Ala Pro Gln Thr Leu Ala Gly Gly Asn Pro Glu Thr
    290                 295                 300
Ala Gln Pro His Ala Gly Thr Leu Pro Arg Pro Arg Pro Val Pro Lys
```

5462

```
305              310              315              320
Pro Arg Asn Arg Pro Ser Val Pro Pro Pro Pro Gln Pro Pro Gly Val
                325                      330                 335
His Ser Ala Gly Asp Ser Ser Leu Thr Asn Thr Ala Pro Thr Ala Ser
            340                      345                 350
Lys Ile Val Thr Asp Ser Asn Ser Arg Val Ser Glu Pro His Arg Ser
        355                      360                 365
Ile Phe Pro Glu Met His Ser Asp Ser Ala Ser Lys Asp Val Pro Gly
    370                      375                 380
Arg Ile Leu Leu Asp Ile Asp Asn Asp Thr Glu Ser Thr Ala Leu
385                      390                 395
```

<210> 6279
<211> 2795
<212> DNA
<213> Homo sapiens

<400> 6279
atggctgctg agaagcaggt cccaggcggc ggcggcggcg cggcggcag tggcggcggc
60
ggtggacgtg gtgccggagg ggaagaaaat aaagaaaacg aacgcccttc ggccggatcg
120
aaggcaaaca aagaatttgg ggatagcctg agtttggaga ttcttcagat tattaaggaa
180
tcccagcagc agcatggttt acggcatgga gattttcaga ggtacagggg ctactgttcc
240
cgtagacaaa gacgtcttcg aaaaacactc aacttcaaga tgggtaacag acacaaattc
300
acagggaaga aagtgactga agagcttctg accgataata gatacttgct tctggttctg
360
atggatgctg aaagagcctg gagctacgcc atgcagctga acaggaagc caacactgaa
420
ccccgaaaac ggtttcactt gttatctcgc ctacgcaaag ccgtgaagca tgcagaggaa
480
ttggaacgct tgtgtaagag caatcgcgtg gatgccaaga ccaaattaga ggctcaggct
540
tacacagctt acctctcagg aatgctacgt tttgaacatc aagaatggaa agctgccatt
600
gaggctttta acaaatgcaa aactatctat gagaagctag ccagtgcttt cacagaggag
660
caggctgtgc tgtataacca acgtgtggaa gagatttcac ccaacatccg ctattgtgca
720
tataatattg gggaccagtc agccatcaat gaactcatgc agatgagatt gaggtctggg
780
ggcactgaag gtctcttggc tgaaaaattg gaggctttga tcactcagac tcgagccaaa
840
caggcagcta ccatgagtga agtggagtgg agagggagaa cggttccagt gaagattgac
900
aaagtgcgca ttttcttatt aggactggct gataacgaag cagctattgt ccaggctgaa
960
agcgaagaaa ctaaggagcg cctgtttgaa tcaatgctca gcgagtgtcg ggacgccatc
1020
caggtggttc gggaggagct caagccagat cagaaacaga gagattatat ccttgaagga
1080
```

```
gagccaggga aggtgtctaa tcttcaatac ttgcatagct acctgactta catcaagcta
1140
tcaacggcaa tcaagcgtaa tgagaacatg gccaaaggtc tgcacagggc tctgctgcag
1200
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1260
gacatcatct tacagaatct ggtggaattg ctccagcttc ctggtttaga ggaagacaaa
1320
gccttccaga aagagatagg cctcaagact ctggtgttca aagcttacag gtgttttttc
1380
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1440
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1500
gacctgcctg atgtgcaaga gctcatcact caagtgcggt cagagaagtg ctccctgcag
1560
gccgcagcca tccttgatgc aaacgacgct catcaaacag agacctcctc ctcccaagtc
1620
aaggacaata agcctctggt tgaacggttt gagacattct gcctggaccc ttcccttgtc
1680
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1740
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1800
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1860
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1920
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1980
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2100
gaaaggggcc gctgctgtct ggtgccctgt gagctgtgat tgattgcctt tggtcagtaa
2160
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2220
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2280
gtttatctat gactatgaaa ctggcaacgt caccccagaa ttacggtcag ccttattccc
2340
cttcacctcc cagtgaacgc taagaagttt cagacaagca gagagctcta tttttagaag
2400
aaatatgtta cactcagaaa tgatgaaacc aaatcttata ttaaaaggca aagatgacgg
2460
agactgtgcc catttcttat atgccctccc tcatgtccag tccccgttct ctcctcggga
2520
gcctagttgc gtgaagccgg tgaggtcaag tgtaacctga cttaccggca actaggtgag
2580
gctgatgcca gatacacatg ttagaggcac tattttcag gacttcccaa tgtgtaattt
2640
ttagatgcca ttatatttta atccccttcg ttaccccccg tttttcctta gtcatccctt
2700
```

5464

```
ttcacttcta ttataacatc aataatagaa gtcacaaaaa caatgtaaga aagcaaggaa
2760
taaaagtgat ttaaacatgt aaaaaaaaaa aaaaa
2795
```

```
<210> 6280
<211> 619
<212> PRT
<213> Homo sapiens
```

```
<400> 6280
Met Ala Ala Glu Lys Gln Val Pro Gly Gly Gly Gly Gly Gly Gly
1               5                   10                  15
Ser Gly Gly Gly Gly Gly Arg Gly Ala Gly Gly Glu Glu Asn Lys Glu
                20                  25                  30
Asn Glu Arg Pro Ser Ala Gly Ser Lys Ala Asn Lys Glu Phe Gly Asp
            35                  40                  45
Ser Leu Ser Leu Glu Ile Leu Gln Ile Ile Lys Glu Ser Gln Gln Gln
        50                  55                  60
His Gly Leu Arg His Gly Asp Phe Gln Arg Tyr Arg Gly Tyr Cys Ser
65                  70                  75                  80
Arg Arg Gln Arg Arg Leu Arg Lys Thr Leu Asn Phe Lys Met Gly Asn
                85                  90                  95
Arg His Lys Phe Thr Gly Lys Lys Val Thr Glu Glu Leu Leu Thr Asp
            100                 105                 110
Asn Arg Tyr Leu Leu Leu Val Leu Met Asp Ala Glu Arg Ala Trp Ser
115                 120                 125
Tyr Ala Met Gln Leu Lys Gln Glu Ala Asn Thr Glu Pro Arg Lys Arg
        130                 135                 140
Phe His Leu Leu Ser Arg Leu Arg Lys Ala Val Lys His Ala Glu Glu
145                 150                 155                 160
Leu Glu Arg Leu Cys Lys Ser Asn Arg Val Asp Ala Lys Thr Lys Leu
                165                 170                 175
Glu Ala Gln Ala Tyr Thr Ala Tyr Leu Ser Gly Met Leu Arg Phe Glu
            180                 185                 190
His Gln Glu Trp Lys Ala Ala Ile Glu Ala Phe Asn Lys Cys Lys Thr
        195                 200                 205
Ile Tyr Glu Lys Leu Ala Ser Ala Phe Thr Glu Glu Gln Ala Val Leu
    210                 215                 220
Tyr Asn Gln Arg Val Glu Glu Ile Ser Pro Asn Ile Arg Tyr Cys Ala
225                 230                 235                 240
Tyr Asn Ile Gly Asp Gln Ser Ala Ile Asn Glu Leu Met Gln Met Arg
                245                 250                 255
Leu Arg Ser Gly Gly Thr Glu Gly Leu Leu Ala Glu Lys Leu Glu Ala
            260                 265                 270
Leu Ile Thr Gln Thr Arg Ala Lys Gln Ala Ala Thr Met Ser Glu Val
        275                 280                 285
Glu Trp Arg Gly Arg Thr Val Pro Val Lys Ile Asp Lys Val Arg Ile
    290                 295                 300
Phe Leu Leu Gly Leu Ala Asp Asn Glu Ala Ala Ile Val Gln Ala Glu
305                 310                 315                 320
Ser Glu Glu Thr Lys Glu Arg Leu Phe Glu Ser Met Leu Ser Glu Cys
                325                 330                 335
Arg Asp Ala Ile Gln Val Val Arg Glu Glu Leu Lys Pro Asp Gln Lys
```

5465

```
                340                   345                   350
Gln Arg Asp Tyr Ile Leu Glu Gly Glu Pro Gly Lys Val Ser Asn Leu
        355                   360                   365
Gln Tyr Leu His Ser Tyr Leu Thr Tyr Ile Lys Leu Ser Thr Ala Ile
        370                   375                   380
Lys Arg Asn Glu Asn Met Ala Lys Gly Leu His Arg Ala Leu Leu Gln
385                   390                   395                   400
Gln Gln Pro Glu Asp Asp Ser Lys Arg Ser Pro Arg Pro Gln Asp Leu
                405                   410                   415
Ile Arg Leu Tyr Asp Ile Ile Leu Gln Asn Leu Val Glu Leu Leu Gln
        420                   425                   430
Leu Pro Gly Leu Glu Glu Asp Lys Ala Phe Gln Lys Glu Ile Gly Leu
        435                   440                   445
Lys Thr Leu Val Phe Lys Ala Tyr Arg Cys Phe Phe Ile Ala Gln Ser
        450                   455                   460
Tyr Val Leu Val Lys Lys Trp Ser Glu Ala Leu Val Leu Tyr Asp Arg
465                   470                   475                   480
Val Leu Lys Tyr Ala Asn Glu Val Asn Ser Asp Ala Gly Ala Phe Lys
                485                   490                   495
Asn Ser Leu Lys Asp Leu Pro Asp Val Gln Glu Leu Ile Thr Gln Val
                500                   505                   510
Arg Ser Glu Lys Cys Ser Leu Gln Ala Ala Ala Ile Leu Asp Ala Asn
        515                   520                   525
Asp Ala His Gln Thr Glu Thr Ser Ser Ser Gln Val Lys Asp Asn Lys
        530                   535                   540
Pro Leu Val Glu Arg Phe Glu Thr Phe Cys Leu Asp Pro Ser Leu Val
545                   550                   555                   560
Thr Lys Gln Ala Asn Leu Val His Phe Pro Pro Gly Phe Gln Pro Ile
                565                   570                   575
Pro Cys Lys Pro Leu Phe Phe Asp Leu Ala Leu Asn His Val Ala Phe
                580                   585                   590
Pro Pro Leu Glu Asp Lys Leu Glu Gln Lys Thr Lys Ser Gly Leu Thr
        595                   600                   605
Gly Tyr Ile Lys Gly Ile Phe Gly Phe Arg Ser
        610                   615
```

```
<210> 6281
<211> 741
<212> DNA
<213> Homo sapiens

<400> 6281
nnctgggttg agagctgtcc ccggttctcc gttctgctct cggggggcacc ttccgggggtt
60
cctaagccgc ggggcccctc gctgcccctc gaggcccttt ccctgaccta ggctttggcc
120
tgggctactc gttccggagc cgccatgtcg tccgacttcg aaggttacga gcaggacttc
180
gcggtgctca ctgcagagat caccagcaag attgcgaggg tcccacgact cccgcctgat
240
gaaagaaac agatggttgc aaatgtggag aaacagcttg aagaagcgaa agaactgctt
300
gaacagatgg atttggaagt ccgagagata ccaccccaaa gtcgagggat gtacagcaac
360
```

```
agaatgagaa gctacaaaca agaaatggga aaactcgaaa cagattttaa aaggtcacgg
420
atcgcctaca gtgacgaagt acggaatgag ctcctggggg atgatgggaa ttcctcagag
480
aaccagaggg cacatctgct cgataacaca gagaggctgg aaaggtcatc tcggagacta
540
gaggctggat accaaatagc agtggaaacc ggtgagaatt ctgagagtga gcaaattgtc
600
ttgcttatgc acagcagtct tcacaacaca tgacatttca gggaaacttc aaaggagtag
660
cagagacagc agcccgagat gtggtttaca tattggggag acaattggga gcttatctgc
720
gcttatcttt ttgcaagtta g
741
```

<210> 6282
<211> 162
<212> PRT
<213> Homo sapiens

<400> 6282

```
Met Ser Ser Asp Phe Glu Gly Tyr Glu Gln Asp Phe Ala Val Leu Thr
1               5               10              15
Ala Glu Ile Thr Ser Lys Ile Ala Arg Val Pro Arg Leu Pro Pro Asp
            20              25              30
Glu Lys Lys Gln Met Val Ala Asn Val Glu Lys Gln Leu Glu Glu Ala
        35              40              45
Lys Glu Leu Leu Glu Gln Met Asp Leu Glu Val Arg Glu Ile Pro Pro
    50              55              60
Gln Ser Arg Gly Met Tyr Ser Asn Arg Met Arg Ser Tyr Lys Gln Glu
65              70              75              80
Met Gly Lys Leu Glu Thr Asp Phe Lys Arg Ser Arg Ile Ala Tyr Ser
            85              90              95
Asp Glu Val Arg Asn Glu Leu Leu Gly Asp Asp Gly Asn Ser Ser Glu
            100             105             110
Asn Gln Arg Ala His Leu Leu Asp Asn Thr Glu Arg Leu Glu Arg Ser
        115             120             125
Ser Arg Arg Leu Glu Ala Gly Tyr Gln Ile Ala Val Glu Thr Gly Glu
    130             135             140
Asn Ser Glu Ser Glu Gln Ile Val Leu Leu Met His Ser Ser Leu His
145             150             155             160
Asn Thr
```

<210> 6283
<211> 2312
<212> DNA
<213> Homo sapiens

<400> 6283
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agcaaggact ggaaggaacc agagacaaac aaggtggttg ggtttgctgg gagtgggatg
120
```

```
gtagctaagc atgtcattta ctgttcttgt tgcttgggta ataggccaca atgaggaagc
180
tagcacggta gtgggcaatg ccaggtggga aggtttgagt tgtgaaagaa gagccaggga
240
gcagagatgg ggaggaggca ctgatggggt gggatgtgct ttggtcacac atagcacagt
300
cgggtgtgtc ctcccttttg tccacagtgg ttcctgggct ttgctgtctt cctcctgccc
360
tgggcgtcca tgtggctgcg cagcctccta aaacctatcc acgtcttttt tggagccgcc
420
atcctctctc tgtccatcgc atccgtcatt tcgggcatta atgagaagct tttcttcagt
480
ttgaaaaaca ccaccaggcc ataccacagc ctgcccagtg aggcggtctt tgccaacagc
540
accgggatgc tggtggtggc ctttgggctg ctggtgctct acatccttct ggcttcatct
600
tggaagcgcc cagagccggg gatcctgacc gacagacagc ccctgctgca tgatggggag
660
tgaagcagca ggaaggggct cccaagagct cctggtggtg cagcctgtgc tcccctcaga
720
agctctgctc ttcccagggc tcccggctgg tttcagcagg cgactttctt ccaatgctgg
780
gcccagactt cttgcctggg tgctggcctg ccctctccgg ccgcttgctg cctgtctgct
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900
gctttccttg gtggctttgc ctgggtgctg ggcctgcctt ctctggctgc ttgctgcctg
960
tctgctttcc ttggtggctt tggcttctgc actccttggc gtcagcctct caggtcctcc
1020
attcacacga ggtcctcctc gctctggccg ctcttgctgc tcctgtctga agaaatcaga
1080
ctgatttcct cttaagactc ctagggatgt ggtgaagagc tgggactcaa gtgcagtcca
1140
cggtgtgaaa catgagggag gtgaggtgtc cgtccacttc ccccataaag gtgtgcattt
1200
cagttaggct gccccgccac agagcaggct tcatctgctc tgccatccag ccccatctgg
1260
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1320
cagcttctgc tgaggagctg accgctctga gctgttctgt ttcgtattgc tgctctgtgt
1380
ctgcatgtat tgtgaccgtg cggctccacc tcttccagct gctgctacag ctgaggcctg
1440
gatcccggcc tttccctgtg acttacgtgt ctgtcaccgg caggcagccc tacaaatcct
1500
ggtgacctgc tctcccaaga acagagcctg tccccagatg tcccagtagc gatgagtaac
1560
agaggtggct gtggacttcc tctacttctc cttgctggat cagggccttc ctgcctcccg
1620
ctgggcaggt ctggccttgc tctcttggca gggccccagc ccctctgacc actctgcagc
1680
tcaccatgca gctgatgcca aagttgtggt gtccagtgtg cagcagccct gggagccact
1740
```

```
gccaccttca gaggggttcc ttgctgagac ccacattgct tcacctggcc ccaccatggc
1800
tgcttgcctg gcccaaccta gcgttctgtg ccatgctaga gcttgagctg ttgctcttct
1860
tcaggggagg aaatagggtg gagagcggga agggtcttgc tcctaagtgt tgctgctgtg
1920
gctttttttgc cttctccaaa gacgcactgc caggtcccaa gcttcagact gctgtgctta
1980
gtaagcaagt gagaagcctg gggtttggag cccacctact ctctggcagc atcagcatcc
2040
tactcctggc aacatcaggc caacgtccac cccagcctca cattgccaga tgttggcaga
2100
agggctaata ttgaccgtct tgactggctg gagccttcaa agccactggg atgtcctcca
2160
ggcacctggg tcccatgacc agctccccgt ctccataggg gtaggcattt cactggttta
2220
tgaagctcga gtttcattaa atatgttaag aatcaaagct gtctttgttc aggctgctat
2280
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2312


<210> 6284
<211> 122
<212> PRT
<213> Homo sapiens


<400> 6284
His Ser Arg Val Cys Pro Pro Phe Cys Pro Gln Trp Phe Leu Gly Phe
1               5                   10                  15
Ala Val Phe Leu Leu Pro Trp Ala Ser Met Trp Leu Arg Ser Leu Leu
                20                  25                  30
Lys Pro Ile His Val Phe Phe Gly Ala Ala Ile Leu Ser Leu Ser Ile
            35                  40                  45
Ala Ser Val Ile Ser Gly Ile Asn Glu Lys Leu Phe Phe Ser Leu Lys
        50                  55                  60
Asn Thr Thr Arg Pro Tyr His Ser Leu Pro Ser Glu Ala Val Phe Ala
65                  70                  75                  80
Asn Ser Thr Gly Met Leu Val Val Ala Phe Gly Leu Leu Val Leu Tyr
                85                  90                  95
Ile Leu Leu Ala Ser Ser Trp Lys Arg Pro Glu Pro Gly Ile Leu Thr
            100                 105                 110 ·
Asp Arg Gln Pro Leu Leu His Asp Gly Glu
        115                 120


<210> 6285
<211> 2542
<212> DNA
<213> Homo sapiens


<400> 6285
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60
ctggagaaat atgtgggggc aagagtcccc aggtggggac agggaaagtg ttgaagcctg
120
```

```
gccactactg ggcagggaag acagagttgc cactgtatgc acaggggatg agcagctgcc
180
ggtactccag gggcaggtgc cgctccacta gcacgtgcag tgagacttgg tcagtgacca
240
ggccctgccg ccgcatcagc agctccaggt cctctggctt cacagtcttg cggccagcat
300
gagcagcaaa tacctccaga tcatcacaaa gatgctggaa atatttatct aggcacttct
360
ccaccatctc aagagccttc ctctccatgg gcatcttggc atagaagcta aagagtttca
420
catagtgctc agtccagcct tgtggggatc ttgccggggc ctggggccgg tggtccgggc
480
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540
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600
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660
cctggcccgt cagcctcagc agtcccctgg gatccctctg cttctgtcac ctctgtgtgt
720
ccctcagcct cttctaccct gctgggtcct tgtgctcctg ttgcctccat ttcactcaca
780
ctcacacctt cttcttccat cttttctct gcctcttcaa ctccatcgtg taagggctct
840
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900
acctcctctg cctctcctgc cagaaactgg gctggtttcc cagggcctga gtgaagggga
960
gagaatacag gccggagacg cagcaggcca aggctgcata gctcagagaa gggtaaagat
1020
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1080
gcttgaggaa ggaaaactac cattgtcaac tctcacccaa gctaaatttg gctccaggcc
1140
accagtgcca cacactcact attcttctgc agcccaggcc cactgctctg tgtcttgcga
1200
ccggcagcct gctcagcgtc ttcagcccca gtgtgaggcg tgcagggcag ggagtgatac
1260
acgttggggg agccaaccat gggctgagag aacggctggg tgtcctccaa cacaatgttg
1320
gagggagcca gggaagtatc tcgcagatcc cgcaaaaagg cacccacgtc tacagctcgg
1380
cgggctggag gtctgcgggc caagccaggc ctctgcactg actgtggctg aagaggtgtg
1440
gcaaaggtca ggttgaggga tctggtgagg aagaggcat cagcattccc ttgaggctct
1500
tgggagagag acagcccctg gtccactccc tgctgaaaca ctgacagtct cagcctctgt
1560
ttcctcctgc caggggccag cagacctgga gccaggggttg tgggggggctc gagctcagga
1620
agttgcagct ccaggctgcc gcaactgctc tcttgtctgg agggttggac cgcctgcggt
1680
gctggcactg gcttcactac cgactcaggc atcaggatgg aagattctgg ggcagttagt
1740
```

5470

.

```
aggatgttct tcagcagcgt ccgaggtgtc tgttcctcca agtgcccact ggcctgaata
1800
tgggccgatc tgccaacaga cctggctcca tgggaacgcc ctctggctat cgtccttgtt
1860
tggccactca acttcctggg ggaagccgtt tcaagcaggg ctctccgggc tccagcccga
1920
gcactccggg gtcgccgcgg ggtgcgcggg tccgctgtat ccagcacgcg tcgcagcagc
1980
gtgcgcggcg tggagtcgct gtcagggttg tggtcagcca tcgtctcggc cccgggccct
2040
cctaaccgcc cagccagctg caggctccgc cttcccgccg ccacagttaa tgtaactctc
2100
gcgatgctcc cgcacagccc cacgggaatt gtagttctcg cactatcgca gctcgcgggg
2160
tggacagtga tggttgcaaa ctccggatgc tttggaggca gcctcgctgc gggtaaacct
2220
cggttaatgt aatgcaagca gcccaagtct tggcttcttc atcatattct gttagtgttt
2280
tcctccgtat ttttcactgg ttgacaatcc tctcacctta agttttcatg gcaactgaat
2340
tagaacttgg tttctgagtc ttccgtggag ttcagtttcc cagaatctat aattccatct
2400
attcgggaaa gtgaggcagg agcattgctt gatccttggg aggcagaggt tgcatatctg
2460
agatcgagcc acaatactcc atcttgggcg gttaagaggg ccccgttccc agcctatgcc
2520
ttcccacttc cctgttcaaa ta
2542
```

```
<210> 6286
<211> 57
<212> PRT
<213> Homo sapiens
```

```
<400> 6286
Pro Gly Pro Ala Ala Ala Ser Ala Ala Pro Gly Pro Leu Ala Ser Gln
1               5                   10                  15
Ser Cys Gly Gln His Glu Gln Gln Ile Pro Pro Asp His His Lys Asp
            20                  25                  30
Ala Gly Asn Ile Tyr Leu Gly Thr Ser Pro Pro Ser Gln Glu Pro Ser
            35                  40                  45
Ser Pro Trp Ala Ser Trp His Arg Ser
    50                  55
```

```
<210> 6287
<211> 1674
<212> DNA
<213> Homo sapiens
```

```
<400> 6287
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60
agcaagccgc acctggagaa gctgaccctg ggcatcacgc gcatcctaga atcttcccca
120
```

5471

```
ggtgtgactg aggtgaccat catagaaaag cctcctgctg aacgtcatat gatttcttcc
180
tgggaacaaa agaataactg tgtgatgcct gaagatgtga agaactttta cctgatgacc
240
aatggcttcc acatgacatg gagtgtgaag ctggatgagc acatcattcc actgggaagc
300
atggcaatta acagcatctc aaaactgact cagctcaccc agtcttccat gtattcactt
360
cctaatgcac ccactctggc agacctggag gacgatacac atgaagccag tgatgatcag
420
ccagagaagc ctcactttga ctctcgcagt gtgatatttg agctggattc atgcaatggc
480
agtgggaaag tttgccttgt ctacaaaagt gggaaaccag cattagcaga agacactgag
540
atctggttcc tggacagagc gttatactgg cattttctca cagacacctt tactgcctat
600
taccgcctgc tcatcaccca cctgggcctg ccccagtggc aatatgcctt caccagctat
660
ggcattagcc cacaggccaa gcaatggttc agcatgtata aacctatcac ctacaacaca
720
aacctgctca cagaagagac cgactccttt gtgaataagc tagatcccag caaagtgttt
780
aagagcaaga caagatcgt aatcccaaaa aagaaagggc ctgtgcagcc tgcaggtggc
840
cagaaagggc cctcaggacc ctccggtccc tccacttcct ccacttctaa atcctcctct
900
ggctctggaa accccacccg gaagtgagca cccctccctc caactcccta ccagctccag
960
agtggtggtt ccatgcaca gatggcccta ggggtgacct ccagttttgc gtgtggaccg
1020
taggcctctt tctagttgaa tgaccaaaat tgtaaggctt ttagtcccac cgacattagc
1080
caggctcgta gtgaggcctc cagagcaggt tgtgctgtcc cctgcctctg gaagcaatgg
1140
ggaatttgga atcttgtgta agtgcccaaa taagtctgag tgctttcctc ttcttcaaca
1200
ctcaaccctc aatcccttag cactgattga ttagagaggt cccccaaaga aaccactggt
1260
tttgacccat gaagcattag aactgcattg ttcattcagg agccactagt cacatatgac
1320
tatttaaatt taaagtaaat tgtatgaaaa attcatttct tcaattgcat tagccacatt
1380
ttgagtattc atgtggctgg tagattctgt attagcacaa agatatggaa catttccatc
1440
accacagaaa gttctgttgg acagcactgc attagaatat tttcatactg ctcttcctca
1500
attaattttt gttgttaatg ttgatgtctt cattggatgg gtcataatgt tccatgaaac
1560
ctctcaagta cacaattgta tgttctttgt atcccttacc acaaatatct cgctctgctc
1620
atttcttttg cagcttccta taaagtttgt cttcctcatc aaaaaaaaaa aaaa
1674
```

<210> 6288

5472

<211> 269
<212> PRT
<213> Homo sapiens

<400> 6288
Pro Gly Val Thr Glu Val Thr Ile Ile Glu Lys Pro Pro Ala Glu Arg
1   5   10   15
His Met Ile Ser Ser Trp Glu Gln Lys Asn Asn Cys Val Met Pro Glu
            20   25   30
Asp Val Lys Asn Phe Tyr Leu Met Thr Asn Gly Phe His Met Thr Trp
        35   40   45
Ser Val Lys Leu Asp Glu His Ile Ile Pro Leu Gly Ser Met Ala Ile
    50   55   60
Asn Ser Ile Ser Lys Leu Thr Gln Leu Thr Gln Ser Ser Met Tyr Ser
65   70   75   80
Leu Pro Asn Ala Pro Thr Leu Ala Asp Leu Glu Asp Asp Thr His Glu
                85   90   95
Ala Ser Asp Asp Gln Pro Glu Lys Pro His Phe Asp Ser Arg Ser Val
            100   105   110
Ile Phe Glu Leu Asp Ser Cys Asn Gly Ser Gly Lys Val Cys Leu Val
        115   120   125
Tyr Lys Ser Gly Lys Pro Ala Leu Ala Glu Asp Thr Glu Ile Trp Phe
    130   135   140
Leu Asp Arg Ala Leu Tyr Trp His Phe Leu Thr Asp Thr Phe Thr Ala
145   150   155   160
Tyr Tyr Arg Leu Leu Ile Thr His Leu Gly Leu Pro Gln Trp Gln Tyr
                165   170   175
Ala Phe Thr Ser Tyr Gly Ile Ser Pro Gln Ala Lys Gln Trp Phe Ser
            180   185   190
Met Tyr Lys Pro Ile Thr Tyr Asn Thr Asn Leu Leu Thr Glu Glu Thr
        195   200   205
Asp Ser Phe Val Asn Lys Leu Asp Pro Ser Lys Val Phe Lys Ser Lys
    210   215   220
Asn Lys Ile Val Ile Pro Lys Lys Lys Gly Pro Val Gln Pro Ala Gly
225   230   235   240
Gly Gln Lys Gly Pro Ser Gly Pro Ser Gly Pro Ser Thr Ser Ser Thr
                245   250   255
Ser Lys Ser Ser Ser Gly Ser Gly Asn Pro Thr Arg Lys
            260   265

<210> 6289
<211> 1321
<212> DNA
<213> Homo sapiens

<400> 6289
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120
tgcgacaatc tcttctgtcc ggccagccgc tggagtcgtt aggtgccgcc ttgcttctga
180
cgagccacac gtttgcttct tccctgtgtt cccagctgga gggacatgag tgtccctggg
240

5473

ccgtcgtctc cggacggggc cctgacacgg ccaccctact gcctggaggc cggggagccg
300
acgcctggtt taagtgacac ttctccagat gaagggttaa tagaggactt gactatagaa
360
gacaaagcag tggagcaact ggcagaagga ttgctttctc attatttgcc agatctgcag
420
agatcaaaac aagccctcca ggaactcaca cagaaccaag ttgtattgtt agacacactg
480
gaacaagaga tttcaaaatt taaagaatgt cattctatgt tggatattaa tgctttgttt
540
gctgaggcta aacactatca tgccaagttg gtgaatataa gaaaagagat gctgatgctt
600
catgaaaaaa catcaaagtt aaaaaaaaga gcacttaaac tgcagcagaa gaggcaaaaa
660
gaagagttgg aaagggagca gcaacgagag aaggggtttg aaagagaaaa gcagttaact
720
gccagaccag ccaaaaggat gtgaaaagtt gtgtttgtgt gttttcttct cctgtcccat
780
atttgggtta tgatgactca agtgtagact gaagttgagg tagtgcctta tgccattatg
840
tcatatgttg aaatccttat tccggtatta ctgtgtctcc atgccttttt tccaagtagc
900
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960
ttaaaattta ttattttgat cttgaattat ttataaactg gaaagtggtt tgattattgt
1020
gagtcaaaac tctaagtggt taaaaattag tatgaattt ttagcttctt aatgaatatg
1080
gatttaaaac tctccagttc ttattttatg aaatgacttg cctttctggt aatacaatgc
1140
tgattttta gtaattgcct tttcattact ttgttaagaa gaaatgccag ctgtttaatc
1200
acacctaccc ctggaaaaga ggtaaacctt ttgaacagtt gaatttcatc agaagctcta
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1320
t
1321

<210> 6290
<211> 172
<212> PRT
<213> Homo sapiens

<400> 6290
Met Ser Val Pro Gly Pro Ser Ser Pro Asp Gly Ala Leu Thr Arg Pro
1   5   10   15
Pro Tyr Cys Leu Glu Ala Gly Glu Pro Thr Pro Gly Leu Ser Asp Thr
            20   25   30
Ser Pro Asp Glu Gly Leu Ile Glu Asp Leu Thr Ile Glu Asp Lys Ala
            35   40   45
Val Glu Gln Leu Ala Glu Gly Leu Leu Ser His Tyr Leu Pro Asp Leu
        50   55   60
Gln Arg Ser Lys Gln Ala Leu Gln Glu Leu Thr Gln Asn Gln Val Val

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65                      70                      75                      80
Leu Leu Asp Thr Leu Glu Gln Glu Ile Ser Lys Phe Lys Glu Cys His
                85                      90                      95
Ser Met Leu Asp Ile Asn Ala Leu Phe Ala Glu Ala Lys His Tyr His
            100                     105                     110
Ala Lys Leu Val Asn Ile Arg Lys Glu Met Leu Met Leu His Glu Lys
        115                     120                     125
Thr Ser Lys Leu Lys Lys Arg Ala Leu Lys Leu Gln Gln Lys Arg Gln
        130                     135                     140
Lys Glu Glu Leu Glu Arg Glu Gln Gln Arg Glu Lys Gly Phe Glu Arg
145                     150                     155                     160
Glu Lys Gln Leu Thr Ala Arg Pro Ala Lys Arg Met
                165                     170
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<210> 6291
<211> 2718
<212> DNA
<213> Homo sapiens

<400> 6291
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120
gaccccctcc tgctccagcg tctgccacgg cccagctccc tgtcagacaa gacccagctc
180
cacagcaggt ggctggactc gtcgcggtgt ctcatgcagc agggcatcaa ggctggggac
240
gcactctggc tgcgcttcaa gtactacagc ttcttcgatt tggatcccaa gacagacccc
300
gtgcggctga cacagctgta tgagcaggcc cggtgggacc tgctgctgga ggagattgac
360
tgcaccgagg aggagatgat ggtgtttgcc gccctgcagt accacatcaa caagctgtcc
420
cagagcgggg aggtggggga gccggctggc acagacccag ggctggacga cctggatgtg
480
gccctgagca acctggaggt gaagctggag gggtcggcgc ccacagatgt gctggacagc
540
ctcaccacca tcccagagct caaggactat ctccgaatct ttcggccccg gaagctgacc
600
ctgaagggct accgccaaca ctgggtggtg ttcaaggaga ccacactgtc ctactacaag
660
agccaggacg aggccctgg ggacccatt cagcagctca acctcaaggg ctgtgaggtg
720
gttcccgatg ttaacgtctc cggccagaag ttctgcatta aactcctagt gccctcccct
780
gagggcatga gtgagatcta cctgcggtgc caggatgagc agcagtatgc ccgctggatg
840
gctggctgcc gcctggcctc caaaggccgc accatggccg acagcagcta caccagcgag
900
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960
cccccacggc ctgatgcctc tgccgagggc ctcaacccct acggcctcgt tgccccccgt
1020
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5475

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ttccagcgaa agttcaaggc caagcagctc accccacgga tcctggaagc ccaccagaat
1080
gtggcccagt tgtcgctggc agaggcccag ctgcgcttca tccaggcctg gcagtccctg
1140
cccgacttcg gcatctccta tgtcatggtc aggttcaagg gcagcaggaa agacgagatc
1200
ctgggcatcg ccaacaaccg actgatccgc atcgacttgg ccgtgggtga cgtggtcaag
1260
acctggcgtt tcagcaacat gcgccagtgg aatgtcaact gggacatccg gcaggtggcc
1320
atcgagtttg atgaacacat caatgtggcc ttcagctgtg tgtctgccag ctgccgaatt
1380
gtacacgagt atatcggggg ctacattttc ctgtcgacgc gggagcgggc ccgtggggag
1440
gagctggatg aagacctctt cctgcagctc accggggggcc atgaggcctt ctgagggctg
1500
tctgattgcc cctgccctgc tcaccaccct gtcacagcca ctcccaagcc cacacccaca
1560
ggggctcact gccccacacc cgctccaggc aggcacccag ctgggcattt cacctgctgt
1620
cactgacttt gtgcaggcca aggacctggc agggccagac gctgtaccat cacccaggcc
1680
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1800
tacaggatga tgaaacatgg tttcaaacga gttctttctt gttacttttt aaaatttctt
1860
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1920
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1980
agctgcaggg cctccttgaa gtacttggga aggaggaagc catcagtatt ccctggagtc
2040
agaatcaccc cattggcaga gcggaagaag ggtattccat ctgccagagc caggggtcca
2100
tcgatgaaca cagctatttc acaatgggac cgcatgccac tgatgatacc ggggtctcca
2160
ggcagtcctg gggccaggtg aatgtgcgtc cttccctggc aggacaggcc tttgagtagg
2220
atggatggcc agtgcttcca gaatgtacca tggactagca tcgggggcag ggctgcggtg
2280
tctccagggg catcagctcc aacttaggta cctgcaggga atggccctgg ttggcccgga
2340
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2400
ccaccacgcg ctgcacatct tcagcagaga agccgcggaa ctggggcaac tgcaggaggg
2460
tgcccagggg cacgaagcca tctgtgggca ggcagggtgc tcaggagcta accttgctct
2520
ggactgggcc agggttaaca gggagccaca ggcaaccgaa acaaagtctg ggcttggaga
2580
tcgcttgggc atcctctgtg ggacctttag aaagtctccc ctttctgggc cgcagttttc
2640
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5476

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cgctggcccg gagtgcac
2718

<210> 6292
<211> 497
<212> PRT
<213> Homo sapiens

<400> 6292
Xaa Val Val Leu Ala Gly Gly Val Ala Pro Ala Leu Phe Arg Gly Met
1   5   10   15
Pro Ala His Phe Ser Asp Ser Ala Gln Thr Glu Ala Cys Tyr His Met
            20   25   30
Leu Ser Arg Pro Gln Pro Pro Asp Pro Leu Leu Leu Gln Arg Leu
        35   40   45
Pro Arg Pro Ser Ser Leu Ser Asp Lys Thr Gln Leu His Ser Arg Trp
    50   55   60
Leu Asp Ser Ser Arg Cys Leu Met Gln Gln Gly Ile Lys Ala Gly Asp
65   70   75   80
Ala Leu Trp Leu Arg Phe Lys Tyr Tyr Ser Phe Phe Asp Leu Asp Pro
                85   90   95
Lys Thr Asp Pro Val Arg Leu Thr Gln Leu Tyr Glu Gln Ala Arg Trp
            100   105   110
Asp Leu Leu Leu Glu Glu Ile Asp Cys Thr Glu Glu Glu Met Met Val
        115   120   125
Phe Ala Ala Leu Gln Tyr His Ile Asn Lys Leu Ser Gln Ser Gly Glu
    130   135   140
Val Gly Glu Pro Ala Gly Thr Asp Pro Gly Leu Asp Asp Leu Asp Val
145   150   155   160
Ala Leu Ser Asn Leu Glu Val Lys Leu Glu Gly Ser Ala Pro Thr Asp
                165   170   175
Val Leu Asp Ser Leu Thr Thr Ile Pro Glu Leu Lys Asp Tyr Leu Arg
            180   185   190
Ile Phe Arg Pro Arg Lys Leu Thr Leu Lys Gly Tyr Arg Gln His Trp
        195   200   205
Val Val Phe Lys Glu Thr Thr Leu Ser Tyr Tyr Lys Ser Gln Asp Glu
    210   215   220
Ala Pro Gly Asp Pro Ile Gln Gln Leu Asn Leu Lys Gly Cys Glu Val
225   230   235   240
Val Pro Asp Val Asn Val Ser Gly Gln Lys Phe Cys Ile Lys Leu Leu
                245   250   255
Val Pro Ser Pro Glu Gly Met Ser Glu Ile Tyr Leu Arg Cys Gln Asp
            260   265   270
Glu Gln Gln Tyr Ala Arg Trp Met Ala Gly Cys Arg Leu Ala Ser Lys
        275   280   285
Gly Arg Thr Met Ala Asp Ser Ser Tyr Thr Ser Glu Val Gln Ala Ile
    290   295   300
Leu Ala Phe Leu Ser Leu Gln His Gly Gln Trp Gly Pro Arg Gln Pro
305   310   315   320
Pro Pro Arg Pro Asp Ala Ser Ala Glu Gly Leu Asn Pro Tyr Gly Leu
                325   330   335
Val Ala Pro Arg Phe Gln Arg Lys Phe Lys Ala Lys Gln Leu Thr Pro

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           340                 345                 350
Arg Ile Leu Glu Ala His Gln Asn Val Ala Gln Leu Ser Leu Ala Glu
           355                 360                 365
Ala Gln Leu Arg Phe Ile Gln Ala Trp Gln Ser Leu Pro Asp Phe Gly
       370                 375                 380
Ile Ser Tyr Val Met Val Arg Phe Lys Gly Ser Arg Lys Asp Glu Ile
385                 390                 395                 400
Leu Gly Ile Ala Asn Asn Arg Leu Ile Arg Ile Asp Leu Ala Val Gly
                   405                 410                 415
Asp Val Val Lys Thr Trp Arg Phe Ser Asn Met Arg Gln Trp Asn Val
               420                 425                 430
Asn Trp Asp Ile Arg Gln Val Ala Ile Glu Phe Asp Glu His Ile Asn
           435                 440                 445
Val Ala Phe Ser Cys Val Ser Ala Ser Cys Arg Ile Val His Glu Tyr
       450                 455                 460
Ile Gly Gly Tyr Ile Phe Leu Ser Thr Arg Glu Arg Ala Arg Gly Glu
465                 470                 475                 480
Glu Leu Asp Glu Asp Leu Phe Leu Gln Leu Thr Gly Gly His Glu Ala
                   485                 490                 495
Phe
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<210> 6293
<211> 750
<212> DNA
<213> Homo sapiens

<400> 6293
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120
gtggaggcgg tggccagact gaagcgttcc cggctgaagg tgaggttctg caccaacgag
180
tcgcagaagt cccgggcaga gctggtgggg cagcttcaga ggctgggatt tgacatctct
240
gagcaggagg taaccgcccc ggcaccagct gcctgccaga tcctgaagga gcgaggcctg
300
cgaccatacc tgctcatcca tgacggagtc cgctcagaat ttgatcagat cgacacatcc
360
aacccaaact gtgtggtaat tgcagacgca ggagaaagct tttcttatca aaacatgaat
420
aacgccttcc aggtgctcat ggagctggaa aaacctgtgc tcatatcact gggaaaaggg
480
cgttactaca aggagacctc tggcctgatg ctggacgttg gtccctacat gaaggcgctt
540
gagtatgcct gtggcatcaa agccgaggtg gtggggaagc cttctcctga gtttttcaag
600
tctgccctgc aagcgatagg agtggaagcc caccaggccg tcatgattgg ggacgatatc
660
gtgggcgacg tcggcggtgc ccagcggtgt ggaatgagag cgctgcaggt gcgcaccggg
720
aagttcaggc ccagtgacga gcaccatccg
750
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<210> 6294
<211> 250
<212> PRT
<213> Homo sapiens

<400> 6294
Xaa Pro Gly Ala Met Ala Pro Trp Gly Lys Arg Leu Ala Gly Val Arg
 1   5   10   15
Gly Val Leu Leu Asp Ile Ser Gly Val Leu Tyr Asp Ser Gly Ala Cys
            20   25   30
Gly Gly Thr Ala Ile Ala Gly Ser Val Glu Ala Val Ala Arg Leu Lys
            35   40   45
Arg Ser Arg Leu Lys Val Arg Phe Cys Thr Asn Glu Ser Gln Lys Ser
        50   55   60
Arg Ala Glu Leu Val Gly Gln Leu Gln Arg Leu Gly Phe Asp Ile Ser
65   70   75   80
Glu Gln Glu Val Thr Ala Pro Ala Pro Ala Ala Cys Gln Ile Leu Lys
                85   90   95
Glu Arg Gly Leu Arg Pro Tyr Leu Leu Ile His Asp Gly Val Arg Ser
            100   105   110
Glu Phe Asp Gln Ile Asp Thr Ser Asn Pro Asn Cys Val Val Ile Ala
        115   120   125
Asp Ala Gly Glu Ser Phe Ser Tyr Gln Asn Met Asn Asn Ala Phe Gln
        130   135   · 140
Val Leu Met Glu Leu Glu Lys Pro Val Leu Ile Ser Leu Gly Lys Gly
145   150   155   160
Arg Tyr Tyr Lys Glu Thr Ser Gly Leu Met Leu Asp Val Gly Pro Tyr
                165   170   175
Met Lys Ala Leu Glu Tyr Ala Cys Gly Ile Lys Ala Glu Val Val Gly
            180   185   190
Lys Pro Ser Pro Glu Phe Phe Lys Ser Ala Leu Gln Ala Ile Gly Val
        195   200   205
Glu Ala His Gln Ala Val Met Ile Gly Asp Asp Ile Val Gly Asp Val
        210   215   220
Gly Gly Ala Gln Arg Cys Gly Met Arg Ala Leu Gln Val Arg Thr Gly
225   230   235   240
Lys Phe Arg Pro Ser Asp Glu His His Pro
                245   250

<210> 6295
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 6295
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ggggcggggc gagtccggag gactcctcgg actgcgcgga acatggcgtt ctggggttgg
120
cgcgccgcgg cagccctccg gctgtggggc cgggtagttg aacgggtcga ggccggggga
180
ggcgtggggc cgtttcaggc ctgcggctgt cggctggtgc ttggcggcag ggacgatgtg
240

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agtgcggggc tgagaggcag ccatggggcc cgcggtgagc ccttggaccc ggcgcgcccc
300
ttgcagaggc ctcccagacc cgaggtgccc agggcattcc ggaggcagcc gagggcagca
360
gctcccagtt tcttcttttc gagtattaaa ggtggaagaa ggtccatatc tttttctgtg
420
ggtgcttcaa gtgttgttgg aagtggaggc agcagtgaca aggggaagct ttccctgcag
480
gatgtagctg agctgattcg ggccagagcc tgccagaggg tggtggtcat ggtgggggcc
540
ggcatcagca cacccagtgg cattccagac ttcagatcgc cggggagtgg cctgtacagc
600
aacctccagc agtacgatct cccgtacccc gaggccattt ttgaactccc attcttcttt
660
cacaacccca agcccttttt cactttggcc aaggagctgt accctggaaa ctacaagccc
720
aacgtcactc actactttct ccggctgctt catgacaagg ggctgcttct gcggctctac
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840
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960
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1020
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1080
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1260
gtgcagcggg aaactgggaa gcttgatgga ccagacaaat aggatgatgg cttgaccgag
1320
gccgtgcgga cgtcagttcc ccgactgctc atcaaccggg acttggtggg gcccttggct
1380
tggcatcctc gcagcaggga cgtggcccag ctgggggacg tggttcacgg cgtggaaagc
1440
ctagtggagc ttctgggctg gacagaagag atgcgggacc ttgtgcagcg ggaaactggg
1500
aagcttgatg gaccagacaa ataggatgat ggctgccccc acacaataaa tggtaacata
1560
ggagacatcc acatcccaat tctgacaaga cctcatgcct gaagacagct tgggcaggtg
1620
aaaccagaat atgtgaactg agtggacacc cgaggctgcc actggaatgt cttctcaggc
1680
catgagctgc agtgactggt agggctgtgt ttacagtcag ggccacccecg tcacatatac
1740
aaaggagctg cctgcctgtt tgctgtgttg aactcttcac tctgctgaag ctcctaatgg
1800
aaaaagcttt cttctgactg tgaccctctt gaactgaatc agaccaactg gaatcccaga
1860
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5480

ccgagtctgc tttctgtgcc tagttgaacg gcaagctcgg catctgttgg ttacaagatc
1920
cagacttggg ccgagcggtc cccagccctc ttcatgttcc gaagtgtagt cttgaggccc
1980
tggtgccgca cttctagcat gttggtctcc tttagtgggg ctatttttaa tgagagaaaa
2040
tctgttcttt ccagcatgaa atacatttag tctcctcaaa aaaaaaaaac a
2091

<210> 6296
<211> 399
<212> PRT
<213> Homo sapiens

<400> 6296
Met Ala Phe Trp Gly Trp Arg Ala Ala Ala Ala Leu Arg Leu Trp Gly
1   5   10   15
Arg Val Val Glu Arg Val Glu Ala Gly Gly Gly Val Gly Pro Phe Gln
            20   25   30
Ala Cys Gly Cys Arg Leu Val Leu Gly Gly Arg Asp Asp Val Ser Ala
        35   40   45
Gly Leu Arg Gly Ser His Gly Ala Arg Gly Glu Pro Leu Asp Pro Ala
    50   55   60
Arg Pro Leu Gln Arg Pro Pro Arg Pro Glu Val Pro Arg Ala Phe Arg
65   70   75   80
Arg Gln Pro Arg Ala Ala Ala Pro Ser Phe Phe Phe Ser Ser Ile Lys
                85   90   95
Gly Gly Arg Arg Ser Ile Ser Phe Ser Val Gly Ala Ser Ser Val Val
            100   105   110
Gly Ser Gly Gly Ser Ser Asp Lys Gly Lys Leu Ser Leu Gln Asp Val
        115   120   125
Ala Glu Leu Ile Arg Ala Arg Ala Cys Gln Arg Val Val Val Met Val
    130   135   140
Gly Ala Gly Ile Ser Thr Pro Ser Gly Ile Pro Asp Phe Arg Ser Pro
145   150   155   160
Gly Ser Gly Leu Tyr Ser Asn Leu Gln Gln Tyr Asp Leu Pro Tyr Pro
                165   170   175
Glu Ala Ile Phe Glu Leu Pro Phe Phe Phe His Asn Pro Lys Pro Phe
            180   185   190
Phe Thr Leu Ala Lys Glu Leu Tyr Pro Gly Asn Tyr Lys Pro Asn Val
        195   200   205
Thr His Tyr Phe Leu Arg Leu Leu His Asp Lys Gly Leu Leu Leu Arg
    210   215   220
Leu Tyr Thr Gln Asn Ile Asp Gly Leu Glu Arg Val Ser Gly Ile Pro
225   230   235   240
Ala Ser Lys Leu Val Glu Ala His Gly Thr Phe Ala Ser Ala Thr Cys
                245   250   255
Thr Val Cys Gln Arg Pro Phe Pro Gly Glu Asp Ile Arg Ala Asp Val
            260   265   270
Met Ala Asp Arg Val Pro Arg Cys Pro Val Cys Thr Gly Val Val Lys
        275   280   285
Pro Asp Ile Val Phe Phe Gly Glu Pro Leu Pro Gln Arg Phe Leu Leu
    290   295   300
His Val Val Asp Phe Pro Met Ala Asp Leu Leu Leu Ile Leu Gly Thr

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305                     310                     315                     320
Ser Leu Glu Val Glu Pro Phe Ala Ser Leu Thr Glu Ala Val Arg Ser
                    325                     330                     335
Ser Val Pro Arg Leu Leu Ile Asn Arg Asp Leu Val Gly Pro Leu Ala
                340                     345                 350
Trp His Pro Arg Ser Arg Asp Val Ala Gln Leu Gly Asp Val Val His
            355                     360                     365
Gly Val Glu Ser Leu Val Glu Leu Leu Gly Trp Thr Glu Glu Met Arg
        370                     375                     380
Asp Leu Val Gln Arg Glu Thr Gly Lys Leu Asp Gly Pro Asp Lys
385                     390                     395
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<210> 6297
<211> 472
<212> DNA
<213> Homo sapiens

<400> 6297

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nggggccgct ggccgagagg ctgaggcggc gtcatgtcct ccgaggtgtc cgcgcgccgc
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gacgccaaga agctggtgcg ctccccgagc ggcctgcgca tggtgcccga acaccgcgcc
120
ttcggaagcc cgttcggcct ggaggagccg cagtgggtcc cggacaagga gtgtcggaga
180
tgtatgcagt gtgacgccaa gtttgacttt ctcaccagaa agcaccactg tcgccgctgc
240
gggaagtgct tctgcgacag gtgctgcagc cagaaggtgc cgctgcggcg catgtgcttt
300
gtggaccccg tgcggcagtg cgcggagtgc gccctggtgt ccctcaagga ggcggagttc
360
tacgacaagc agctcaaagt gctcctgagc ggtaaggacg ggtgtcctgc acagtcctgc
420
gcgctccgcc agccggctcc tcgtgtctgt ggcgatgctg tgggctgtgc ac
472
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<210> 6298
<211> 146
<212> PRT
<213> Homo sapiens

<400> 6298

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Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
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Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
                20                  25                  30
Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
            35                  40                  45
Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
        50                  55                  60
His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65                  70                  75                  80
Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
                85                  90                  95
Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys
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5482

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                100                    105                    110
Gln Leu Lys Val Leu Leu Ser Gly Lys Asp Gly Cys Pro Ala Gln Ser
            115                    120                    125
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<210> 6299
<211> 1466
<212> DNA
<213> Homo sapiens

<400> 6299

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5483

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1380
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1466

<210> 6300
<211> 372
<212> PRT
<213> Homo sapiens

<400> 6300
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Leu Gln Leu Val Ala His Leu Arg Ala Gly Glu Arg Cys Gly Gln Ala
            20   25   30
Ser Gly Gly Pro Arg Arg Ser Arg Gly Gly Gln Pro Ala His Trp Pro
            35   40   45
Arg Glu Ser Leu Val Leu Tyr His Trp Thr Gln Ser Phe Ser Ser Gln
        50   55   60
Lys Val Arg Leu Val Ile Ala Glu Lys Gly Leu Val Cys Glu Glu Arg
65   70   75   80
Asp Val Ser Leu Pro Gln Ser Glu His Lys Glu Pro Trp Phe Met Arg
                85   90   95
Leu Asn Leu Gly Glu Glu Val Pro Val Ile Ile His Arg Asp Asn Ile
            100   105   110
Ile Ser Asp Tyr Asp Gln Ile Ile Asp Tyr Val Glu Arg Thr Phe Thr
            115   120   125
Gly Glu His Val Val Ala Leu Met Pro Glu Val Gly Ser Leu Gln His
        130   135   140
Ala Arg Val Leu Gln Tyr Arg Glu Leu Leu Asp Ala Leu Pro Met Asp
145   150   155   160
Ala Tyr Thr His Gly Cys Ile Leu His Pro Glu Leu Thr Thr Asp Ser
                165   170   175
Met Ile Pro Lys Tyr Ala Thr Ala Glu Ile Arg Arg His Leu Ala Asn
            180   185   190
Ala Thr Thr Asp Leu Met Lys Leu Asp His Glu Glu Glu Pro Gln Leu
            195   200   205
Ser Glu Pro Tyr Leu Ser Lys Gln Lys Lys Leu Met Ala Lys Ile Leu
        210   215   220
Glu His Asp Asp Val Ser Tyr Leu Lys Lys Ile Leu Gly Glu Leu Ala
225   230   235   240
Met Val Leu Asp Gln Ile Glu Ala Glu Leu Glu Lys Arg Lys Leu Glu
                245   250   255
Asn Glu Gly Gln Lys Cys Glu Leu Trp Leu Cys Gly Cys Ala Phe Thr
            260   265   270
Leu Ala Asp Val Leu Leu Gly Ala Thr Leu His Arg Leu Lys Phe Leu
            275   280   285
Gly Leu Ser Lys Lys Tyr Trp Glu Asp Gly Ser Arg Pro Asn Leu Gln

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      290                    295                   300
Ser Phe Phe Glu Arg Val Gln Arg Arg Phe Ala Phe Arg Lys Val Leu
305                    310                   315                   320
Gly Asp Ile His Thr Thr Leu Leu Ser Ala Val Ile Pro Asn Ala Phe
              325                   330                   335
Arg Leu Val Lys Arg Lys Pro Pro Ser Phe Phe Gly Ala Ser Phe Leu
          340                   345                   350
Met Gly Ser Leu Gly Gly Met Gly Tyr Phe Ala Tyr Trp Tyr Leu Lys
          355                   360                   365
Lys Lys Tyr Ile
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<210> 6301
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6301
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240
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360
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480
attcgtgtcc gcaaaccatt caagtgtcgc tgtgggaaga gttacaagac agctcagggc
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600
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660
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720
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<210> 6302
<211> 202
<212> PRT

<213> Homo sapiens

<400> 6302
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Leu Ser Tyr Ile Asn Arg Phe Met Thr Asp Ala Ala Arg Arg Glu Gln
            20   25   30
Glu Ser Leu Lys Lys Lys Ile Gln Pro Lys Leu Ser Leu Thr Leu Ser
        35   40   45
Ser Ser Val Ser Arg Gly Asn Val Ser Thr Pro Pro Arg His Ser Ser
    50   55   60
Gly Ser Leu Thr Pro Pro Val Thr Pro Pro Ile Thr Pro Ser Ser Ser
65   70   75   80
Phe Arg Ser Ser Thr Pro Thr Gly Ser Glu Tyr Asp Glu Glu Glu Val
            85   90   95
Asp Tyr Glu Glu Ser Asp Ser Asp Glu Ser Trp Thr Thr Glu Ser Ala
            100   105   110
Ile Ser Ser Glu Ala Ile Leu Ser Ser Met Cys Met Asn Gly Gly Glu
        115   120   125
Glu Lys Pro Phe Ala Cys Pro Val Pro Gly Cys Lys Lys Arg Tyr Lys
    130   135   140
Asn Val Asn Gly Ile Lys Tyr His Ala Lys Asn Gly His Arg Thr Gln
145   150   155   160
Ile Arg Val Arg Lys Pro Phe Lys Cys Arg Cys Gly Lys Ser Tyr Lys
                165   170   175
Thr Ala Gln Gly Leu Arg His His Thr Ile Asn Phe His Pro Pro Val
            180   185   190
Ser Ala Glu Ile Ile Arg Lys Met Gln Gln
        195   200

<210> 6303
<211> 676
<212> DNA
<213> Homo sapiens

<400> 6303
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300
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420
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480
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540

5486

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<210> 6304
<211> 181
<212> PRT
<213> Homo sapiens

<400> 6304
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Val Ser Ser Lys Thr Leu Lys Ala Glu Gly Phe Phe Arg Ser Asn Lys
            20   25   30
Val Phe Val Glu Ser Ser Glu Thr Leu Asp Tyr Gln Met Ala Phe Ala
            35   40   45
Asp Ser His Leu Trp Lys Leu Leu Asp Arg His Ala Asn Thr Ile Arg
        50   55   60
Leu Phe Val Leu Leu Pro Glu Gln Ser Pro Val Ser Tyr Ser Lys Arg
65   70   75   80
Thr Ala Tyr Gln Lys Ala Gly Gly Asp Ser Gly Asn Val Asp Asp Asp
                85   90   95
Cys Glu Arg Val Lys Gly Pro Val Gly Ser Leu Lys Ser Val Glu Ala
            100   105   110
Ile Leu Glu Glu Ser Thr Glu Lys Leu Lys Ser Leu Ser Leu Gln Gln
        115   120   125
Gln Gln Asp Gly Asp Asn Gly Asp Ser Ser Lys Ser Thr Glu Thr Ser
        130   135   140
Asp Phe Glu Asn Ile Glu Ser Pro Leu Asn Glu Arg Asp Ser Ser Ala
145   150   155   160
Ser Val Asp Asn Arg Glu Leu Glu Gln His Ile Gln Thr Ser Asp Pro
                165   170   175
Glu Lys Phe Ser Val
                180

<210> 6305
<211> 3853
<212> DNA
<213> Homo sapiens

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300

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5488

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5489

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<210> 6306
<211> 474
<212> PRT
<213> Homo sapiens

<400> 6306
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            20   25   30
Thr Trp Asp Ser Thr Phe Cys Ala Val Asn Pro Lys Phe Leu Ala Val
        35   40   45
Ile Val Glu Ala Ser Gly Gly Gly Ala Phe Leu Val Leu Pro Leu Ser
    50   55   60
Lys Thr Gly Arg Ile Asp Lys Ala Tyr Pro Thr Val Cys Gly His Thr
65   70   75   80
Gly Pro Val Leu Asp Ile Asp Trp Cys Pro His Asn Asp Gln Val Ile
                85   90   95
Ala Ser Gly Ser Glu Asp Cys Thr Val Met Val Trp Gln Ile Pro Glu
            100   105   110
Asn Gly Leu Thr Ser Pro Leu Thr Glu Pro Val Val Val Leu Glu Gly
            115   120   125
His Thr Lys Arg Val Gly Ile Ile Ala Trp His Pro Thr Ala Arg Asn
    130   135   140
Val Leu Leu Ser Ala Gly Cys Asp Asn Val Val Leu Ile Trp Asn Val
145   150   155   160
Gly Thr Ala Glu Glu Leu Tyr Arg Leu Asp Ser Leu His Pro Asp Leu
                165   170   175
Ile Tyr Asn Val Ser Trp Asn His Asn Gly Ser Leu Phe Cys Ser Ala
            180   185   190
Cys Lys Asp Lys Ser Val Arg Ile Ile Asp Pro Arg Arg Gly Thr Leu
            195   200   205
Val Ala Glu Arg Glu Lys Ala His Glu Gly Ala Arg Pro Met Arg Ala
    210   215   220
Ile Phe Leu Ala Asp Gly Lys Val Phe Thr Thr Gly Phe Ser Arg Met
225   230   235   240
Ser Glu Arg Gln Leu Ala Leu Trp Asn Pro Lys Asn Met Gln Glu Pro
                245   250   255
Ile Ala Leu His Glu Met Asp Thr Ser Asn Gly Val Leu Leu Pro Phe
            260   265   270
Tyr Asp Pro Asp Thr Ser Ile Ile Tyr Leu Cys Gly Lys Gly Asp Ser

5490

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Ser Ile Arg Tyr Phe Glu Ile Thr Asp Glu Ser Pro Tyr Val His Tyr
    290                   295                   300
Leu Asn Thr Phe Ser Ser Lys Glu Pro Gln Arg Gly Met Gly Tyr Met
305                   310                   315                   320
Pro Lys Arg Gly Leu Asp Val Asn Lys Cys Glu Ile Ala Arg Phe Phe
                  325                   330                   335
Lys Leu His Glu Arg Lys Cys Glu Pro Ile Ile Met Thr Val Pro Arg
                  340                   345                   350
Lys Ser Asp Leu Phe Gln Asp Asp Leu Tyr Pro Asp Thr Ala Gly Pro
                  355                   360                   365
Glu Ala Ala Leu Glu Ala Glu Glu Trp Phe Glu Gly Lys Asn Ala Asp
    370                   375                   380
Pro Ile Leu Ile Ser Leu Lys His Gly Tyr Ile Pro Gly Lys Asn Arg
385                   390                   395                   400
Asp Leu Lys Val Val Lys Lys Asn Ile Leu Asp Ser Lys Pro Thr Ala
                  405                   410                   415
Asn Lys Lys Cys Asp Leu Ile Ser Ile Pro Lys Lys Thr Thr Asp Thr
                  420                   425                   430
Ala Ser Val Gln Asn Glu Ala Lys Leu Asp Glu Ile Leu Lys Glu Ile
                  435                   440                   445
Lys Ser Ile Lys Asp Thr Ile Cys Asn Gln Asp Glu Arg Ile Ser Lys
    450                   455                   460
Leu Glu Gln Gln Met Ala Lys Ile Ala Ala
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<210> 6307
<211> 2119
<212> DNA
<213> Homo sapiens
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<400> 6307
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gcaagatgta gcaagaacac tgcgtggccc tactttctgc caatgttgaa tcgccaggat
660
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gccgtgcaga agctcatggt gcacaactgg gaataccttg gcaagcagct ccagtccgag
1680
cagccccaga ccgctgccgc ccgaagctaa gcctgcctct ggccttcccc tccgcctcaa
1740
tgcagaacca gtagtgggag cactgtgttt agagttaaga gtgaacactg tttgattta
1800
cttggaattt cctctgttat atagcttttc ccaatgctaa tttccaaaca acaacaacaa
1860
aataacatgt ttgcctgtta agttgtataa aagtaggtga ttctgtattt aaagaaaata
1920
ttactgttac atatactgct tgcaatttct gtatttattg ttctctggaa ataaatatag
1980
ttattaaagg attctcactc caaacatggc ctctctcttt acttggactt tgaacaaaag
2040
tcaactgttg tctcttttca aaccaaattg ggagaattgt tgcaaagtag tgaatggcaa
2100
ataaatgttt taaaatcta
2119
```

```
<210> 6308
<211> 483
<212> PRT
```

<213> Homo sapiens

<400> 6308
```
Met Thr Lys Met Asp Ile Arg Gly Ala Val Asp Ala Ala Val Pro Thr
1               5               10              15
Asn Ile Ile Ala Ala Lys Ala Ala Glu Val Arg Ala Asn Lys Val Asn
            20              25              30
Trp Gln Ser Tyr Leu Gln Gly Gln Met Ile Ser Ala Glu Asp Cys Glu
        35              40              45
Phe Ile Gln Arg Phe Glu Met Lys Arg Ser Pro Glu Glu Lys Gln Glu
    50              55              60
Met Leu Gln Thr Glu Gly Ser Gln Cys Ala Lys Thr Phe Ile Asn Leu
65              70              75              80
Met Thr His Ile Cys Lys Glu Gln Thr Val Gln Tyr Ile Leu Thr Met
            85              90              95
Val Asp Asp Met Leu Gln Glu Asn His Gln Arg Val Ser Ile Phe Phe
            100             105             110
Asp Tyr Ala Arg Cys Ser Lys Asn Thr Ala Trp Pro Tyr Phe Leu Pro
        115             120             125
Met Leu Asn Arg Gln Asp Pro Phe Thr Val His Met Ala Ala Arg Ile
    130             135             140
Ile Ala Lys Leu Ala Ala Trp Gly Lys Glu Leu Met Glu Gly Ser Asp
145             150             155             160
Leu Asn Tyr Tyr Phe Asn Trp Ile Lys Thr Gln Leu Ser Ser Gln Lys
            165             170             175
Leu Arg Gly Ser Gly Val Ala Val Glu Thr Gly Thr Val Ser Ser Ser
        180             185             190
Asp Ser Ser Gln Tyr Val Gln Cys Val Ala Gly Cys Leu Gln Leu Met
        195             200             205
Leu Arg Val Asn Glu Tyr Arg Phe Ala Trp Val Glu Ala Asp Gly Val
    210             215             220
Asn Cys Ile Met Gly Val Leu Ser Asn Lys Cys Gly Phe Gln Leu Gln
225             230             235             240
Tyr Gln Met Ile Phe Ser Ile Trp Leu Leu Ala Phe Ser Pro Gln Met
            245             250             255
Cys Glu His Leu Arg Arg Tyr Asn Ile Ile Pro Val Leu Ser Asp Ile
        260             265             270
Leu Gln Glu Ser Val Lys Glu Lys Val Thr Arg Ile Ile Leu Ala Ala
    275             280             285
Phe Arg Asn Phe Leu Glu Lys Ser Thr Glu Arg Glu Thr Arg Gln Glu
    290             295             300
Tyr Ala Leu Ala Met Ile Gln Cys Lys Val Leu Lys Gln Leu Glu Asn
305             310             315             320
Leu Glu Gln Gln Lys Tyr Asp Asp Glu Asp Ile Ser Glu Asp Ile Lys
            325             330             335
Phe Leu Leu Glu Lys Leu Gly Glu Ser Val Gln Asp Leu Ser Ser Phe
            340             345             350
Asp Glu Tyr Ser Ser Glu Leu Lys Ser Gly Arg Leu Glu Trp Ser Pro
        355             360             365
Val His Lys Ser Glu Lys Phe Trp Arg Glu Asn Ala Val Arg Leu Asn
    370             375             380
Glu Lys Asn Tyr Glu Leu Leu Lys Ile Leu Thr Lys Leu Leu Glu Val
385             390             395             400
Ser Asp Asp Pro Gln Val Leu Ala Val Ala Ala His Asp Val Gly Glu
```

5493

```
                       405                410                415
Tyr Val Arg His Tyr Pro Arg Gly Lys Arg Val Ile Glu Gln Leu Gly
            420                425                430
Gly Lys Gln Leu Val Met Asn His Met His His Glu Asp Gln Gln Val
        435                440                445
Arg Tyr Asn Ala Leu Leu Ala Val Gln Lys Leu Met Val His Asn Trp
    450                455                460
Glu Tyr Leu Gly Lys Gln Leu Gln Ser Glu Gln Pro Gln Thr Ala Ala
465                470                475                480
Ala Arg Ser
```

```
<210> 6309
<211> 564
<212> DNA
<213> Homo sapiens

<400> 6309
cggccgcagc gttcacggtg acatcgcaaa aggcgagggg gagacgcgcc cgcgggaccc
60
cttccggtg  tgctcccacg tggcgtcgac cgggaagaag gggccggtag ggagcccttc
120
ccaggcgcct cccacggggt tcccccgcag ccgcgacacc accaacagtc gccgcaaccg
180
ccgcgtggaa cagacgaccc gggtctcaaa gaggcggcgc gggcgggacg cagcccctgg
240
tccatctcgg gcgccgcctg atgcactcct actgcgcccg ggtcctcccg gcctgtctca
300
ctttgggggg ctcagggtcc tcacgggga cgcctgcacg taagccagga cggcgttctg
360
caggaagctc gccctctggg cctcctcgtc ccggatgcgg gcgatctccg cctcccggag
420
ccgcagcttc tcccggagag acgcgttctc gctctccctg tccagcagcg cgatctgagc
480
tcactggaac ctccacctcc caggttcgag tgattctcct gcctcagcct cctgagtagc
540
tggtattaca gggtgccacc acta
564
```

```
<210> 6310
<211> 83
<212> PRT
<213> Homo sapiens

<400> 6310
Cys Thr Pro Thr Ala Pro Gly Ser Ser Arg Pro Val Ser Leu Trp Gly
1                5                10                15
Ala Gln Gly Pro His Gly Gly Arg Leu His Val Ser Gln Asp Gly Val
            20                25                30
Leu Gln Glu Ala Arg Pro Leu Gly Leu Leu Val Pro Asp Ala Gly Asp
        35                40                45
Leu Arg Leu Pro Glu Pro Gln Leu Leu Pro Glu Arg Arg Val Leu Ala
    50                55                60
Leu Pro Val Gln Gln Arg Asp Leu Ser Ser Leu Glu Pro Pro Pro Pro
```

65   70   75   80
Arg Phe Glu

<210> 6311
<211> 1548
<212> DNA
<213> Homo sapiens

<400> 6311
nggtttggca agagaccaac ctcagctcag actttccatc tgagcacagc cgtttggcta
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tgagcttttt actgaatttt atagcaactc tgatttcttc ctttaaatga ttggaggctt
120
tttaaagatc ttatggggct caaatactaa cttcataaat ggccttttga ataacagcag
180
caaataatct ctcagctgat atttcaattt actaaggaag cacaaattaa aacattcctg
240
ctacacagtc atgggctggc acatgtctgg ttggatgaat acaaggagca gtattttttcc
300
ttaagacctg acctgaagac gaaaagctat ggcaatatca gtgagcgtgt ggaactgaga
360
aagaagttgg gctgtaaatc atttaaatgg tatttggata atgtatacсc agagatgcag
420
atatctgggt cccacgccaa accccaacaa cccatttttg tcaatagagg gccaaaacga
480
cccaaagtcc ttcaacgtgg aaggctctat cacctccaga ccaacaaatg cctggtggcc
540
cagggccgcc caagtcagaa gggaggtctc gtggtgctta aggcctgtga ctacagtgac
600
ccaaatcaga tctggatcta taatgaagag catgaattgg ttttaaatag tctcctttgt
660
ctagatatgt cagagactcg ctcatcagac ccgccacggc tcatgaaatg ccacgggtca
720
ggaggatccc agcagtggac ctttgggaaa aacaatcggc tataccaggt gtcggttgga
780
cagtgcctga gagcagtgga tcccctgggt cagaagggct ctgtcgccat ggcgatctgc
840
gatggctcct cttcacagca gtggcatttg gaaggttaag gtggatgctg tggcgggaac
900
gttgcttcat caggcgttgc ctccggtgtg gagtttgggg ctttaggaaa gcctgggttg
960
ggtggagcag aaccatcttg gagaagatga cagttccctg tcctcccgga gatgcctggg
1020
tgtgttagca gaggtgacac gtgtctgaca gagacgggag ctctgagtgt ccacgggtga
1080
agaagtgagt gtccacgggt gaagaagtga gtatgtttca cctggacatt aaggtgatgt
1140
ttgagctgct gttaaggaat ttcttgctta tagaggcaaa ccacagtatc attttaactc
1200
tagaattggg cttgtacaga aggataaaac ccaggaaaat ggatatttct attcagattt
1260
atttatgcct cttttttaatc ccctttaatg atgcagtggt ttttatctga tcaggaactt
1320

5495

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gtcatgattt cctttcttag acttcatagg agatagtgct ttaaaaaaaa aaaaacttct
1380
attatttgtt tagtatgttg taagtagatc attttaaaaa actgaatcta tattatgttt
1440
aacttcagaa ggcatcattt ataagacagt atggcagtta attataaaat tattttgatg
1500
aattatgata caatctacat aataaagaat ccttttgatt aaaaaaaa
1548
```

```
<210> 6312
<211> 234
<212> PRT
<213> Homo sapiens
```

```
<400> 6312
Gln Gln Gln Ile Ile Ser Gln Leu Ile Phe Gln Phe Thr Lys Glu Ala
1               5                   10                  15
Gln Ile Lys Thr Phe Leu Leu His Ser His Gly Leu Ala His Val Trp
                20                  25                  30
Leu Asp Glu Tyr Lys Glu Gln Tyr Phe Ser Leu Arg Pro Asp Leu Lys
            35                  40                  45
Thr Lys Ser Tyr Gly Asn Ile Ser Glu Arg Val Glu Leu Arg Lys Lys
        50                  55                  60
Leu Gly Cys Lys Ser Phe Lys Trp Tyr Leu Asp Asn Val Tyr Pro Glu
65                  70                  75                  80
Met Gln Ile Ser Gly Ser His Ala Lys Pro Gln Gln Pro Ile Phe Val
                85                  90                  95
Asn Arg Gly Pro Lys Arg Pro Lys Val Leu Gln Arg Gly Arg Leu Tyr
                100                 105                 110
His Leu Gln Thr Asn Lys Cys Leu Val Ala Gln Gly Arg Pro Ser Gln
            115                 120                 125
Lys Gly Gly Leu Val Val Leu Lys Ala Cys Asp Tyr Ser Asp Pro Asn
        130                 135                 140
Gln Ile Trp Ile Tyr Asn Glu Glu His Glu Leu Val Leu Asn Ser Leu
145                 150                 155                 160
Leu Cys Leu Asp Met Ser Glu Thr Arg Ser Ser Asp Pro Pro Arg Leu
                165                 170                 175
Met Lys Cys His Gly Ser Gly Gly Ser Gln Gln Trp Thr Phe Gly Lys
                180                 185                 190
Asn Asn Arg Leu Tyr Gln Val Ser Val Gly Gln Cys Leu Arg Ala Val
            195                 200                 205
Asp Pro Leu Gly Gln Lys Gly Ser Val Ala Met Ala Ile Cys Asp Gly
        210                 215                 220
Ser Ser Ser Gln Gln Trp His Leu Glu Gly
225                 230
```

```
<210> 6313
<211> 725
<212> DNA
<213> Homo sapiens
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<400> 6313
tttttttttt tttttttttt tttttttttg gtaattaaca taatttatta cgcaaaaaat
60
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gagaaaatat acagcaggag ggatgaggag tacacatagg aaatttctgt gattttcttc
120
attttgatcg tattgctttc ttgtcttcag gagggaagat ttcgacttca aaagtaacaa
180
aatatttaag aagagaattc acatctttct gttctagctg gtattcttgc attattttct
240
cagcagtcca ggtttctggg aaaagcttat gattattgag aagtgtcaat gcttctacaa
300
tggaaatttt gcctttggga atgctcttaa tatttatcat atcaaaatga tggtctttcg
360
gcaatctgaa ttccttcggc tcttgacatg tttcagcagc ttttacctgc aaggaagaca
420
caggatcttt ggaatcaaca tacacatctt ttagaaacga cagcagcttt tcatctttac
480
gagcaatctc tcctttaact tctggataga gactaatctg ctctcgcagg aggctgttgg
540
tagaggggtg tctgggagcg acagagggct tcatcttgct gatttcccgt tccgctcggt
600
tctctaggtt gaaattcctg ataccgcgaa tcactagtgc tcccatctcc tcataacatt
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720
ggagc
725

<210> 6314
<211> 175
<212> PRT
<213> Homo sapiens

<400> 6314
Met Gly Ala Leu Val Ile Arg Gly Ile Arg Asn Phe Asn Leu Glu Asn
1   5   10   15
Arg Ala Glu Arg Glu Ile Ser Lys Met Lys Pro Ser Val Ala Pro Arg
                20   25   30
His Pro Ser Thr Asn Ser Leu Leu Arg Glu Gln Ile Ser Leu Tyr Pro
            35   40   45
Glu Val Lys Gly Glu Ile Ala Arg Lys Asp Glu Lys Leu Leu Ser Phe
        50   55   60
Leu Lys Asp Val Tyr Val Asp Ser Lys Asp Pro Val Ser Ser Leu Gln
65   70   75   80
Val Lys Ala Ala Glu Thr Cys Gln Glu Pro Lys Glu Phe Arg Leu Pro
                85   90   95
Lys Asp His His Phe Asp Met Ile Asn Ile Lys Ser Ile Pro Lys Gly
            100   105   110
Lys Ile Ser Ile Val Glu Ala Leu Thr Leu Leu Asn Asn His Lys Leu
            115   120   125
Phe Pro Glu Thr Trp Thr Ala Glu Lys Ile Met Gln Glu Tyr Gln Leu
        130   135   140
Glu Gln Lys Asp Val Asn Ser Leu Leu Lys Tyr Phe Val Thr Phe Glu
145   150   155   160
Val Glu Ile Phe Pro Pro Glu Asp Lys Lys Ala Ile Arg Ser Lys
                165   170   175

5497

<210> 6315
<211> 378
<212> DNA
<213> Homo sapiens

<400> 6315
caagaatcca ttgaagccag caagactgca ctttgtcctg aaagatttgt acccctaagt
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gctcaaaaca gaaaacttgt ggaggccata aaacaaggtc acattcctga gctccaggag
120
tatgtaaaat ataaatatgc aatggatgaa gctgatgaaa aaggatggtt tccattgcat
180
gaagctgttg ttcaacccat tcaacaaata cttgagattg ttctggatgc atcctataag
240
acactctggg aattcaagac ctgtgatgga gaaacaccct tgactttggc agtcaaagct
300
ggtctggtgg aaaatgtaag aactttatta gaaaagggag tgtggcccaa cacaaaaaat
360
gataaaggag agacccccc
378

<210> 6316
<211> 126
<212> PRT
<213> Homo sapiens

<400> 6316
Gln Glu Ser Ile Glu Ala Ser Lys Thr Ala Leu Cys Pro Glu Arg Phe
1   5   10   15
Val Pro Leu Ser Ala Gln Asn Arg Lys Leu Val Glu Ala Ile Lys Gln
            20   25   30
Gly His Ile Pro Glu Leu Gln Glu Tyr Val Lys Tyr Lys Tyr Ala Met
            35   40   45
Asp Glu Ala Asp Glu Lys Gly Trp Phe Pro Leu His Glu Ala Val Val
        50   55   60
Gln Pro Ile Gln Gln Ile Leu Glu Ile Val Leu Asp Ala Ser Tyr Lys
65   70   75   80
Thr Leu Trp Glu Phe Lys Thr Cys Asp Gly Glu Thr Pro Leu Thr Leu
                85   90   95
Ala Val Lys Ala Gly Leu Val Glu Asn Val Arg Thr Leu Leu Glu Lys
            100   105   110
Gly Val Trp Pro Asn Thr Lys Asn Asp Lys Gly Glu Thr Pro
            115   120   125

<210> 6317
<211> 1201
<212> DNA
<213> Homo sapiens

<400> 6317
nngggcccag aactacaact ctgcagcgaa agatagagat gcccttgaaa atgtgtcaca
60
ttcttaagat gtcttgccga agtagcaaga gcggagggtg actgtgtgag caggagcgag
120

```
agggcgccag ctcctgcggg ggaggttcct actgcgcgcc ccaccctgtg caagaatgtc
180
aggctttagg gcagctgcca taggccccag gggcatcagg actctgcctc tgaaccagag
240
ctgctttccc gactaacttc aatctggaga gatggtaagt tatctaaccg gctcttcttt
300
tggcgagact gctctttctc cttaatcaga gccccccatg ccctttgcag ctcagagtcg
360
tcttcctcag cgccaggcac cctgtgatcc actttcttcg tattcttttc tttggtcttg
420
ggtgcagttc ctaggcgagt ccataaatta cctgatttct tctcccgagt atcggcgtag
480
aggcctttac tatcctgcct gggaacacct agcctactat gcacatcaga agagggctct
540
ctccgaacga cggggttact actaaaagcc ttttccggag aatgtggtct ttttcctaac
600
cgctggcgta tatctgattt agtactgctg actggtggcc gtggacggga gtgctgacgt
660
ttctcatcta atagatgtcg gacatctgca aatttctcag gtggtaattt gttaccaatt
720
cggtttttga tattgcttga agatacacta tctgccctca tggagttcct aatatttttc
780
aactgagatt ccacttcgtc agcatacata gtcattttca tgcttttctt tggtgaaggc
840
gtggaaatca ttttcagttc tagatcatag tccatttcat ctgagtctga gctgctggca
900
ctggatcgtc tagacgcgct ccgctcccgg ggctgcttga gagccgggag ctcctcgtgg
960
tactctacca ccactctgtc atctgcatcc atgtcctggt cttcttcttc ctcttcctct
1020
tcctcctcct cctcctcttc ctcctcttca atgggttcct cgggaacatt cactagccca
1080
gaatgtcgat gtttatacga cgtcaagcca acgtcatccc caatcagggc tctcttcttg
1140
atcacgtccc gctgaatacg acgggaatga tatcttcgct tccatgaatt gctaagaatt
1200
c
1201


<210> 6318
<211> 94
<212> PRT
<213> Homo sapiens

<400> 6318
Ser Ile Ser Ser Glu Ser Glu Leu Leu Ala Leu Asp Arg Leu Asp Ala
1               5                   10                  15
Leu Arg Ser Arg Gly Cys Leu Arg Ala Gly Ser Ser Ser Trp Tyr Ser
                20                  25                  30
Thr Thr Thr Leu Ser Ser Ala Ser Met Ser Trp Ser Ser Ser Ser Ser
            35                  40                  45
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Met Gly Ser Ser
        50                  55                  60
Gly Thr Phe Thr Ser Pro Glu Cys Arg Cys Leu Tyr Asp Val Lys Pro
```

5499

```
65                      70                   75                      80
Thr Ser Ser Pro Ile Arg Ala Leu Phe Leu Ile Thr Ser Arg
                    85                   90
```

```
<210> 6319
<211> 345
<212> DNA
<213> Homo sapiens

<400> 6319
gcgccgccgc tgtgggccgc ctccgcagcc ggccacctgg acgtggtgcg gagcctgctg
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cgccgcgggg cctcggtgaa ccgcaccacg cgcaccaact ccacgcctct ccgcgccgcc
120
tgcttcgacg gccacctgga ggtggtgcgc tacctggtcg gcgagcacca ggccgacctg
180
gaggtggcca accggcacgg ccacacgtgc ctcatgatct cgtgctacaa gggccaccgt
240
gagatcgccc gctacctgct ggagcagggc gcccaggtga accggcgcag cgccaagggc
300
aacacggccc tgcatgactg cgccgagtcc ggcagcctgg agatc
345
```

```
<210> 6320
<211> 115
<212> PRT
<213> Homo sapiens

<400> 6320
Ala Pro Pro Leu Trp Ala Ala Ser Ala Ala Gly His Leu Asp Val Val
1               5                   10                  15
Arg Ser Leu Leu Arg Arg Gly Ala Ser Val Asn Arg Thr Thr Arg Thr
            20                  25                  30
Asn Ser Thr Pro Leu Arg Ala Ala Cys Phe Asp Gly His Leu Glu Val
            35                  40                  45
Val Arg Tyr Leu Val Gly Glu His Gln Ala Asp Leu Glu Val Ala Asn
        50                  55                  60
Arg His Gly His Thr Cys Leu Met Ile Ser Cys Tyr Lys Gly His Arg
65                  70                  75                  80
Glu Ile Ala Arg Tyr Leu Leu Glu Gln Gly Ala Gln Val Asn Arg Arg
                85                  90                  95
Ser Ala Lys Gly Asn Thr Ala Leu His Asp Cys Ala Glu Ser Gly Ser
                100                 105                 110
Leu Glu Ile
        115
```

```
<210> 6321
<211> 1442
<212> DNA
<213> Homo sapiens

<400> 6321
aagctttgcc agagtggttt ggctacagtc agctcttcta caggaagtgg cattttccac
60
```

5500

```
ttgtgaaacg gtaggtcatt ccctgcctca tgcagaactc agccctgtgg agctccacca
120
cctggcccag gccctgccca catgcaacct cccggggtgg ccctcaatga cctgcacgtc
180
ccttcactct aaggaacct gagttacagt ggccttaagg acatgtgtat ttagaagcct
240
ttgtgtacaa actagctctg tgcgctctca gtttaccgtc ctcacacttt attgttagct
300
gttctttaag tttctcacac attattggca attatgtaaa aatcaagaac ctctataaaa
360
caacctggct ttccaggtgg aattccgcat acagccaaaa ctggattcca gtgtggccag
420
acaacgccca tgtcccaatt taagagtcgc tgtcctcacc accatccgga gtggcctctc
480
tgtcagtgtg tgatgtggcc agggcagtgt ccacctgaac ttcctcctca tcggactgaa
540
caacggggga ctccccaccc tcactgatgt cccgggtggc cgagtcggtg caggtggagg
600
aagaagaagg tggcttggct cttaattctg agggatttgg aacctggagg gtaatctcat
660
tctgacaggt actggattca ggccctaagg cgggggacag cacagtgttc tcttctcctc
720
cagagttcag gaagacgtcc agggcctcct ggtccgatat gtccatcagg tccatctgct
780
ccagcatgtc cacgttcact tccatggatg acatgctgcc tatgggctct cgccgctctg
840
caatctgcag gtagccagtg gacaggtact gctgctccat gtcctgctgg aaggcttcct
900
caaaaaactt ctgccgctcc ttcagcttca tttgctgggt gtgctccatt tccaggacct
960
tctgggcgtg ctctgcatct agttcagagg gatccctctg actattttcg gtgagtcctg
1020
gagatgacat ggatgtgaga cctgaatgag tgaacagaag ctcagtgctg gtcaagtgaa
1080
gcctccagtt accaggcagc tgccctcacg tgcatcttct gggatgtaga acaaaggaag
1140
tgaggctgaa gccagaagca ggtttttcca aagaaattgt agtaagccta ttagtttttt
1200
gctgatggct taagcagata tacattggaa tctactgcct ctataaaagc aaaatgcaag
1260
ctctcagggg ctctagtgtg caaagatgta tgcaccggtc tgggaccata ccaaatgcag
1320
ctcaaaatgg aggggaggga aggctgaaaa taactaaatc caacagaatt tgtcatctag
1380
gtacaaagat gctttagtaa cacagcaaaa gagagatgaa atcttgctgt ttgaaagtag
1440
ta
1442

<210> 6322
<211> 196
<212> PRT
<213> Homo sapiens
```

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<400> 6322
Met Ser Ser Pro Gly Leu Thr Glu Asn Ser Gln Arg Asp Pro Ser Glu
1               5               10              15
Leu Asp Ala Glu His Ala Gln Lys Val Leu Glu Met Glu His Thr Gln
            20              25              30
Gln Met Lys Leu Lys Glu Arg Gln Lys Phe Phe Glu Glu Ala Phe Gln
        35              40              45
Gln Asp Met Glu Gln Gln Tyr Leu Ser Thr Gly Tyr Leu Gln Ile Ala
    50              55              60
Glu Arg Arg Glu Pro Ile Gly Ser Met Ser Ser Met Glu Val Asn Val
65              70              75              80
Asp Met Leu Glu Gln Met Asp Leu Met Asp Ile Ser Asp Gln Glu Ala
            85              90              95
Leu Asp Val Phe Leu Asn Ser Gly Gly Glu Glu Asn Thr Val Leu Ser
        100             105             110
Pro Ala Leu Gly Pro Glu Ser Ser Thr Cys Gln Asn Glu Ile Thr Leu
        115             120             125
Gln Val Pro Asn Pro Ser Glu Leu Arg Ala Lys Pro Pro Ser Ser Ser
    130             135             140
Ser Thr Cys Thr Asp Ser Ala Thr Arg Asp Ile Ser Glu Gly Gly Glu
145             150             155             160
Ser Pro Val Val Gln Ser Asp Glu Glu Glu Val Gln Val Asp Thr Ala
            165             170             175
Leu Ala Thr Ser His Thr Asp Arg Glu Ala Thr Pro Asp Gly Gly Glu
            180             185             190
Asp Ser Asp Ser
            195
```

What is claimed is:

1.   An isolated nucleic acid molecule encoding a polypeptide comprising an amino acid sequence that is at least 85% identical to a polypeptide including an amino acid sequence selected from the group consisting of SEQ ID NO:2n, wherein n is any integer 1-3161, or the complement thereof.

2.   The isolated nucleic acid molecule of claim 1, said molecule hybridizing under stringent conditions to a nucleic acid sequence complementary to a nucleic acid molecule comprising the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n, wherein n is any integer 1-3161, or the complement thereof.

3.   The isolated nucleic acid molecule of claim 1, said molecule encoding a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161, or an amino acid sequence comprising one or more conservative substitutions in the amino acid sequence selected from the group consisting of SEQ ID NO: 2n.

4.   The isolated nucleic acid molecule of claim 1, wherein said molecule encodes a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161.

5.   The isolated nucleic acid molecule of claim 1, wherein said molecule comprise the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein n any integer 1-3161, or the complement thereof.

6.   An oligonucleotide less than 100 nucleotides in length and comprising at least contiguous nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein n is a integer 1-3161, or the complement thereof.

7.   A vector comprising the nucleic acid molecule of claim 1.

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8.   The vector of claim 7, wherein said vector is an expression vector.

9   A host cell comprising the isolated nucleic acid molecule of claim 1.

10.   A substantially purified polypeptide comprising an amino acid sequence at least 80% identical to a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: $2n$, wherein n is any integer 1-3161.

11.   The polypeptide of claim 10, wherein said polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: $2n$, wherein n is any integer 1-3161.

12.   An antibody that selectively binds to the polypeptide of claim 10.

13.   A pharmaceutical composition comprising a therapeutically or prophylactically effective amount of a therapeutic selected from the group consisting of:
a)   the nucleic acid of claim 1;
b)   the polypeptide of claim 10; and
c)   the antibody of claim 12;
and a pharmaceutically acceptable carrier.

14.   A kit comprising in one or more containers, a therapeutically or prophylactically effective amount of the pharmaceutical composition of claim 13.

15.   A method of producing the polypeptide of claim 10, said method comprising culturing the host cell of claim 9 under conditions in which the nucleic acid molecule is expressed.

16.   A method of detecting the presence of the polypeptide of claim 10 in a sample, comprising contacting the sample with a compound that selectively binds to said polypeptide under conditions allowing the formation of a complex between said polypeptide and said

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compound, and detecting said complex, if present, thereby identifying said polypeptide in said sample.

17.   A method of detecting the presence of a nucleic acid molecule of claim 1 in a sample, the method comprising contacting the sample with a nucleic acid probe or primer that selectively binds to the nucleic acid molecule and determining whether the nucleic acid probe c primer bound to the nucleic acid molecule of claim 1 is present in the sample.

18.   A method for modulating the activity of the polypeptide of claim 10, the methoc comprising contacting a cell sample comprising the polypeptide of claim 10 with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptid

19.   The use of a therapeutic in the manufacture of a medicament for treating a syndrome associated with a ORFX-associated disorder, wherein said therapeutic is selected fro the group consisting of:
   a)   the nucleic acid of claim 1;
   b)   the polypeptide of claim 10; and
   c)   the antibody of claim 12.

20.   A method for screening for a modulator of activity or of latency or predispositio to an ORFX-associated disorder, said method comprising:
   a)   contacting a test compound with the polypeptide of claim 10; and
   b)   determining if said test compound binds to said polypeptide,
wherein binding of said test compound to said polypeptide indicates the test compound is a modulator of activity or of latency or predisposition to an ORFX-associated disorder.

21.   A method for screening for a modulator of activity or of latency or predispositio: to an ORFX-associated disorder, said method comprising:
   a)   administering a test compound to a test subject at an increased risk ORFX-
         associated disorder, wherein said test subject recombinantly expresses a
         polypeptide encoded by the nucleotide of claim 1;

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b)   measuring expression the activity of said protein in said test subject;

c)   measuring the activity of said protein in a control subject that recombinantly expresses said protein and is not at increased risk for an ORFX-associated disorder; and

d)   comparing expression of said protein in said test subject and said control subject, wherein a change in the activity of said protein in said test subject relative to said control subject indicates the test compound is a modulator or of latency of predispostition to an ORFX-associated disorder.

22.   The method of claim 20, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

23.   A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide of claim 11 in a subject, the method comprising:

a)   measuring the amount of the polypeptide in a sample from said subject; and

b)   comparing the amount of said polypeptide in step (a) to the amount of the polypeptide present in a control sample,

wherein an alteration in the level of the polypeptide in step (a) as compared to the control sample indicates the presence of or predisposition to a disease in said subject.

24.   The method of claim 23, wherein said subject is a human.

25.   A method for determining the presence of or predisposition to a disease associated with altered levels the nucleic acid molecule of claim 1 in a subject, the method comprising:

a)   measuring the amount of the nucleic acid in a sample from the mammalian subject; and

b)   comparing the amount of said nucleic acid in step (a) to the amount of the nucleic acid present in a control sample,

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wherein an alteration in the level of the nucleic acid in step (a) as compared to the coi
sample indicates the presence of or predisposition to said disease in said subject.

26.   The method of claim 25, wherein said subject is a human.

27.   A method of treating or preventing a pathological condition associated with ai
ORFX-associated disorder in a subject, the method comprising administering to said subject
polypeptide of claim 10 in an amount sufficient to alleviate or prevent said pathological
condition.

28.   The method of claim 27, wherein said subject is a human.

29.   A method of treating or preventing a pathological condition associated with ai
ORFX-associated disorder in a subject, the method comprising administering to said subject
nucleic acid molecule of claim 1 in an amount sufficient to alleviate or prevent said patholog:
condition.

30.   The method of claim 29, wherein said subject is a human.

31.   A method of treating or preventing a pathological condition associated with ar
ORFX-associated disorder in a subject, the method comprising administering to said subject i
antibody of claim 12 in an amount sufficient to alleviate or prevent said pathological conditio

32.   The method of claim 31, wherein said subject is a human.

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